



Council of Unit Owners for the Fountain Hills Condominium
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EV Charging Station Case Study

The Fountain Hills Condominium is a community of 222 garden style residential units located in the Kingsview Village area of Germantown/West, Montgomery County. The condominium is federated with the Fountain Hills Community Association. The master association is comprised of 900 condominiums, townhomes and single-family residences.

Each condominium unit owner has the right of use of the 380 unassigned parking spaces maintained by the condominium. Residents and visitors are required to display parking permits, although enforcement is primarily limited to vehicles parked overnight.

In September 2019, the Condominium received a request from a condominium unit owner to provide a dedicated parking space and permission to install buried electrical cable across the common area so they could have a privately owned Level 2 charger for their exclusive use. While ultimately denying this request, the Board decided to investigate the feasibility and expense of siting a community charging station in its common parking area.

The Board learned that:

- 1) There were incentives that might be available for condominium associations to defray the cost of the purchase and installation of an EV charging station.
- 2) There were 4 EVs that regularly parked in the condominium and additional EVs in the larger Fountain Hills community.
- 3) The closest public EV charging station was nearly one mile away from the Condominium and the next closest was several miles away.
- 4) Montgomery County had not acted on proposals to adopt regulations or zoning standards that would limit or govern how common ownership communities operate EV charging stations.
- 5) The Condominium's Bylaws and Rules authorized the Board to create and operate amenities on a common area. However, the Board was not permitted to institute a fee for parking.
- 6) There were several nationally recognized vendors available for the lease/purchase and operation of an EV charging station.

The Board established vendor selection criteria in on which to judge proposals for a Level 2 charging station:

- Charging station equipment eligible for participation in grant and rebate programs.
- Proposal to include installation costs with reputable electrical contractor.
- Compatibility with condominium's existing electric system to keep installation costs low.
- Vendor responsible for repair and maintenance of station.
- Subscription with network operator allowing flexible pricing plans to recoup operating costs.
- Low level-of-effort in day-to-day station administration and payment processing.



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The decision making process for the selection and siting of the EV charging station was made quickly because the board was of a single mind on many issues. First, there was consensus agreement that the siting of the station would be in a location preferred due to its proximity to existing electrical panel with sufficient capacity to support the requirements of the charging equipment. Second, the consensus of the board was to select the option that would require the lowest capital investment while maximizing available grants or rebates regardless of whether that be through purchase of the equipment or leasing. Third, the Board was unanimous that the operation of the charging station not be subsidized by the condominium. Users of the charging station would be assessed a fee that would reflect the cost of the energy consumed plus any administrative or payment processing fees. Lastly, the Board did not want the condominium to be responsible for maintenance as well as limit to the greatest extent possible the administration of the charging station by the property management company.

The Condominium solicited proposals from 3 EV charging station network operators for the purchase or lease of EV charging equipment and the management of the charging infrastructure. A Baltimore based foundation also submitted a proposal to provide and install an EV charging station at no cost to the condominium.

Two of the network operators and the foundation made a site visit to make recommendations on the location of a dual-head, Level 2 charging station. Each proposal recommended a site location for the station in an open parking area adjacent to a condominium building. The preferred siting provided access to existing infrastructure with capacity to accommodate the additional power requirements without substantial modification or long-length cable installation to the parking areas where the EV charger.

In evaluating the charging station proposals, the Board carefully considered the foundation's proposal for siting of an EV charging station at no cost to the condominium. However, the foundation would not permit assessing EV charging sessions a fee for the electricity consumed in a charging session. The board believed that it was unfair for all unit owners to bear the cost of electricity that would be consumed by individual unit owners.

The condominium received proposals from two of the network providers, ChargePoint (CP) and SemaConnect. They each offered a plan for the outright purchase of a dual-headed Level 2 EV charger in addition to site preparation and installation by a local electrical contractor. Each offered a selection of subscription-based network administration services for user registration and session payment processing. The condominium would be responsible for maintenance and repair of the equipment.

CP also offered a subscription model, ChargePoint as a Service (CPAAS) that best resembled a turn-key operation. CPAAS provided a term contract that included a single annual payment for the rental of the Level 2 EV charger, network administration, collection of session fees with regular pass-through payment to the condominium, and maintenance and repair of the charger. The Board was attracted to a



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leasing agreement because of the lower capital investment along with the responsibility for maintaining the equipment rested with CP. The Board believed that a lease agreement was a hedge against the evolving technology standards for EV charging equipment. A lease would allow greater flexibility to upgrade the EV charging station while reducing the need for capital investment in the equipment.

Management of the day-to-day operation of the station, pricing policy and user registration activities were performed by the condominium through CP's web-hosted internet application. In addition to the annual CPAAS fee, the condominium would pay the costs of site-preparation and EV charger installation to CP's preferred electrical contractor or one selected by the condominium. The board was confident that the day-to-day administration of the EV charging station could be performed by a board member, effectively reducing overhead costs through eliminating the property management company role in the EV charging station.

The Board received no questions, comments, or concerns about the EV charging station from the condominium unit owners during the discussion and consideration of the proposal concerning the EV charging station.

In October 2019 the condominium contracted with CP for the CPAAS proposal for a term of 5 years. The annual cost for the CP subscription and equipment lease is approximately \$2,300 per year. At the end of the subscription, CP is responsible for removing its equipment. The electrical wiring and other infrastructure installed by the Condominium will remain.

After some fits and starts, CP's local electrical contractor completed installation of the EV charger. The charging station was placed into operation at the end of December.

When first placed into operation, the access to the charger was limited to residents who pre-registered with CP through the condominium. The initial pricing policy was set to cover the cost of electricity consumed by the kilowatt-hour (KwH) plus a small upcharge for CP's payment processing fee. By the end of January, registration was opened to all members of the Fountain Hills community. A second tier of pricing was set to allow EV charging sessions by any CP network account holder. These general public users paid a per-hour session charge on top of the per-KwH base fee.

The condominium's experience was that the EV charger was used most often by a core set of Fountain Hills community residents for sessions lasting on average 4 hours. Approximately, 12 users from the general public frequented the charger for sessions lasting on average less than 1 hour. Our analysis found that the CP system would not charge the hourly session fee for a charging session of less than one hour.

After 4 months, the condominium modified its pricing structure in an effort to attract additional users from the general public and to lengthen the charging session. All users now paid a per-KwH base fee while assessing a minimum cost that was equivalent to one-hour of operation. The modifications to the pricing policies have resulted in a slow growth of the number of general public users (17 connected



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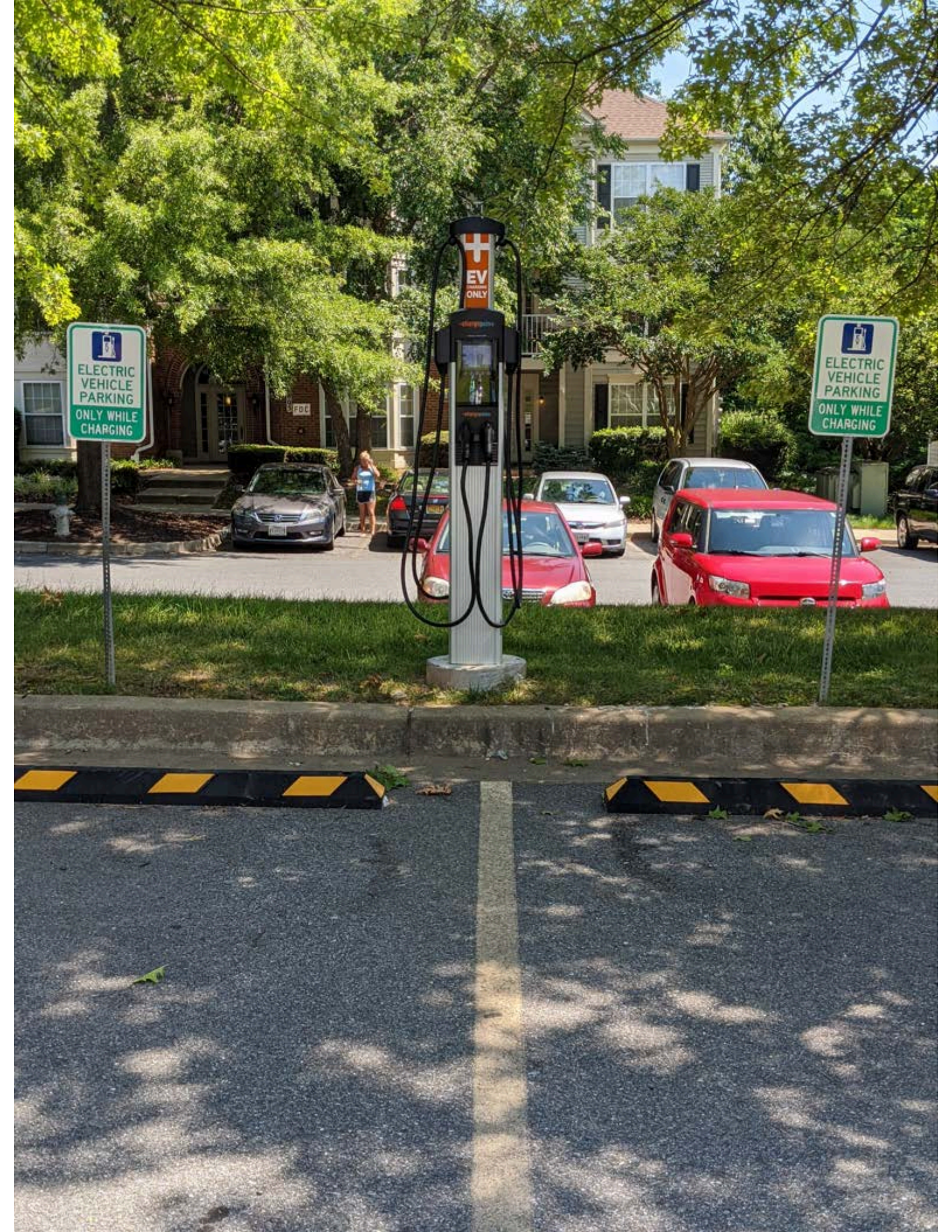
accounts) while the average charging session length has increased to 3 hours. One factor influencing the utilization of the EV charger has been the overall reduction in driving due to the public health emergency in response to the COVID-19 pandemic.

The total initial investment was approximately \$11,500, including the first year of the CP subscription. While the board views the operation of the EV charging station as being a success in bringing a valuable amenity to the community, the PEPCO rebate for installation of a charging station in a multi-family property remains pending. The condominium's application was initially denied because our purchase and installation was made directly through the CP in violation of PEPCO's program rules which stipulate that the installation be performed through their preferred electrical contractor. The condominium received a \$4,000 grant from the Maryland Energy Administration, Electric Vehicle Supply Equipment rebate program reimbursing for installation of an EV charging station in a multi-family community.

Overall, we have had very high satisfaction with the equipment, the CP network and the proprietary internet tools to support operation of the EV charging station. The equipment operates flawlessly. CP's web-based tools to manage the day-to-day management of the charger are intuitive and responsive. An incident of vandalism that damaged a part of the charging station was promptly repaired by CP at no cost to the condominium. The flexibility to set pricing for EV charging sessions has allowed the condominium to recover its operating costs while remaining an attractive option for the EV owners in our area.

August 2020

David Holtzman
President



EV ONLY

ELECTRIC VEHICLE PARKING ONLY WHILE CHARGING

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