

Date: July 9, 2025

To: Keller City Council

From: Mike Sivertsen

Re: In opposition to the SUP for an EV charging station in Keller Town Center

City Council Members:

I am opposing the SUP for 1000 Keller Parkway to contain an electric vehicle charging station. The attached information has been carefully researched and assembled in support of my opposition. Thank you for reviewing this prior to the July 15 City Council meeting. I will be speaking to the high points during the Public Hearing portion.

Sincerely,

A handwritten signature in blue ink that reads "Mike Sivertsen". The signature is written in a cursive, flowing style.

Mike Sivertsen

Keller, TX

UPDATE

A Proposed Electric Vehicle Charging Station in Keller Town Center: What You May Not Know

by

Michael Sivertsen

Keller, Texas

Date: July 9, 2025

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Introduction

This paper is based on the author's personal visits to various electric vehicle charging stations (EVCS) in the Keller area and research from numerous online sources. This was done to provide more complete information and support an optimal decision in this matter.

An earlier version of this document was presented to the Keller P&Z on June 24. Two P&Z Commissioners voted against the EVCS proposal due primarily to fire concerns, limited parking, and aesthetics at the proposed location.

Based on comments from the P&Z Commissioners this updated document focuses on parking, space issues, and a comparison to nearby charging stations. Fire hazards from EVCS and EVs are included to ensure the Keller Fire Department and citizens in the affected area understand the risks inherent in both.

Proposed location in Town Center

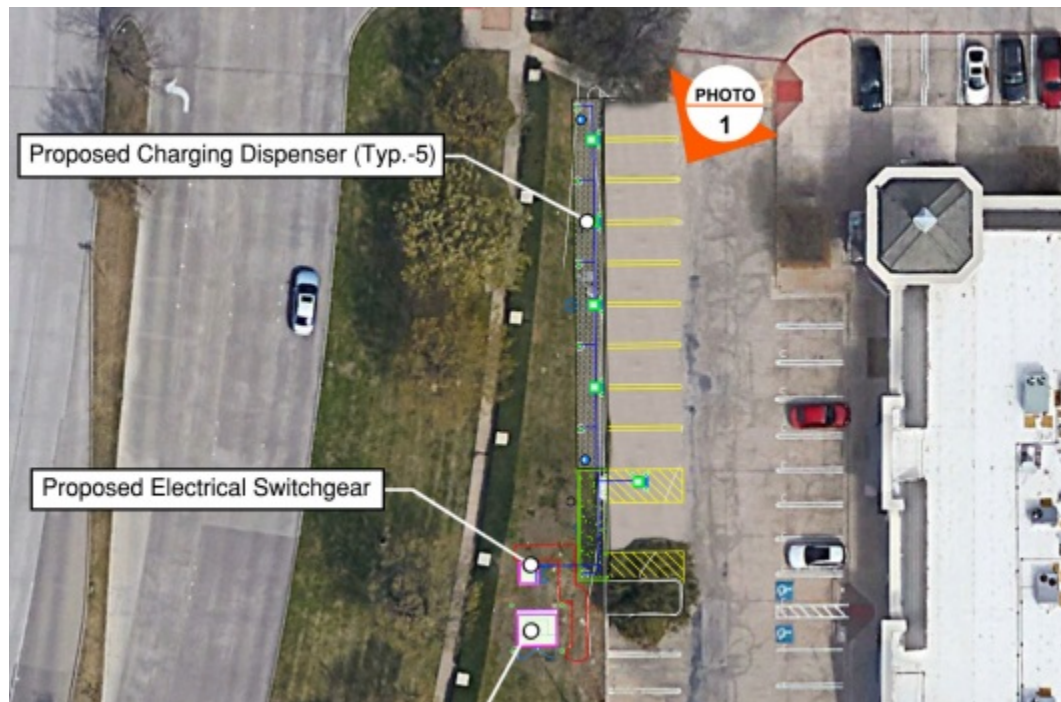
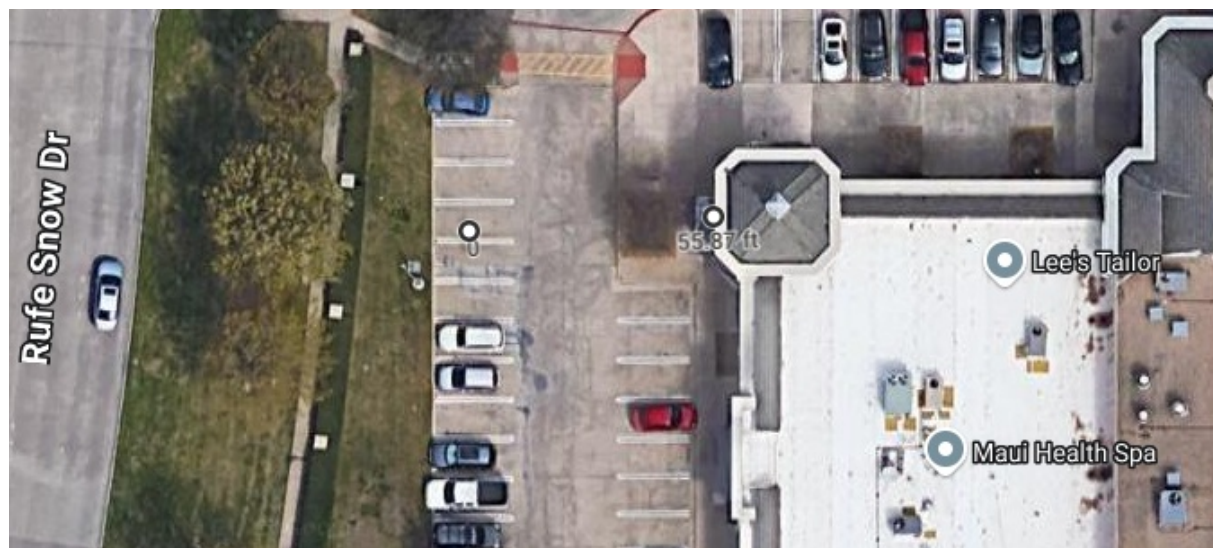


Figure 1: Proposed location (aerial view)

Figure 1 is from the applicant's packet. Thirteen existing parking spots will be allocated to the EVCS. Removing 13 parking spaces from this small parking area on the west side of Town Center will be a major inconvenience for many shoppers. Most, if not all, drivers are hesitant to use parking spaces clearly marked for EVs and possibly incur an angry EV driver trying to charge their car. Thus these spaces are essentially removed from use by non-EV drivers (the vast majority).

The proposed location is about 56 feet from the nearest building as shown below.



Parking and traffic issues

These pictures were taken on July 7 in the afternoon when many would come to shop, etc. This is representative of most days and indicates a parking area already 50% to 75% full. The proposed EVCS would remove 25% of the parking spaces in this location. FedEx and UPS delivery trucks add to the extensive use of parking.



Figure 2: Parking spaces in use



Figure 3: Parking spaces in use



Figure 4: FedEx delivery trucks further occupy location



Figure 5: UPS delivery trucks also occupy location

Would a large Keller fire department truck and other emergency vehicles have room to maneuver in the event of a EVCS or EV fire in this location?

Proposed location from Rufe Snow perspective

These pictures depict the proposed location from the small bit of raised landscape between the parking area and Rufe Snow. The 13 parking spaces that would be removed from use and allocated for the EVCS are constantly in use.



Figure 6: View from Rufe Snow indicates high parking space use



Figure 7: View from Rufe Snow indicates parking space use at another time

Nearby charging stations

There are several charging stations within a few minutes of Town Center. The distance and time from Town Center to each was determined by driving with a Garmin GPS unit.

- Wal-Mart Supercenter on Golden Triangle — 2.3 miles, 8 min.
- 950 North Main Street — 2 miles, 7 min.
- Kohl's on Hwy 377 — 4 miles, 9 min.
- Tesla EVCS Near Target and Wal-Mart on Precinct Line Rd. — 5 miles, 11 min.
- Walgreens on Hwy 377 — 3.3 miles, 10 min.
- 1300 Keller Parkway (reserved for Olympus Community residents) — 0.3 miles

Wal-Mart Alpitronic DC Chargers

These recently installed chargers are the same model (HYC400) proposed for Town Center. They are positioned 65 YARDS (almost 200 feet) from the nearest structure. Only four (4) are installed in a massive parking area. Contrast this with the five (5) chargers proposed for Town Center in a MUCH smaller parking area. Clearly the Town Center EVCS proposal is overly ambitious and unreasonable in the proposed location.



Figure 8: Wal-Mart DC chargers - near Keller Sports Park

These fast chargers are just eight minutes from Keller Town Center.

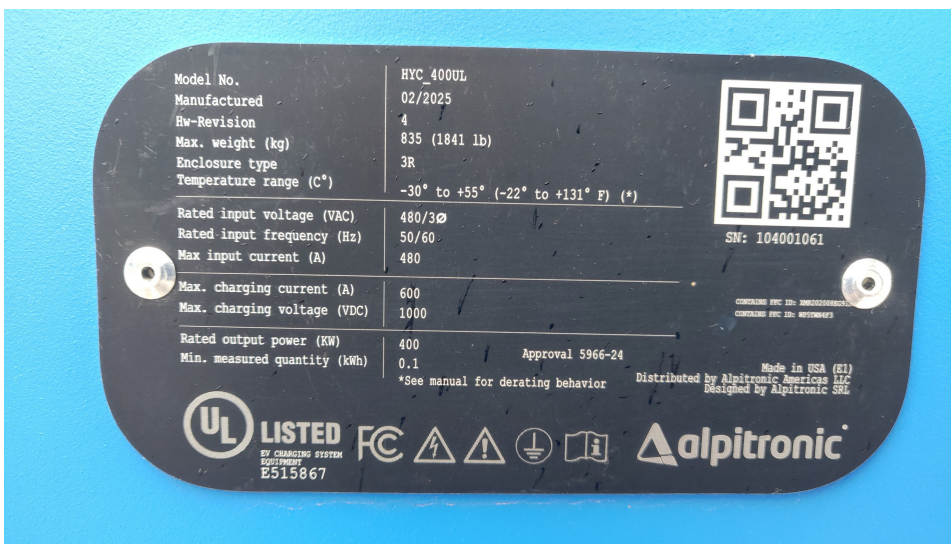


Figure 9: Wal-Mart DC charger face plate

Charger at 950 N Main Street Keller

This charger is located about 60 feet from a nearby building and is seven minutes from Town Center.



Figure 10: 950 N Main St charger and building

Olympus Community near Town Center

These two chargers are reserved for Olympus community residents. The leasing office states that only about 10 residents have EVs (about 5% of the total population in this community immediately adjacent to Town Center).



Figure 11: 1300 Keller Parkway chargers

Charging Station at Kohl's on Hwy 377

These chargers are located about 70 feet from the building entrance.



Figure 12: Kohl's chargers and nearby building

These two chargers are nine minutes from Town Center.



Figure 13: Kohl's chargers

Tesla chargers on Precinct Line near Target

Eight Tesla superchargers are located about 65 feet from the nearest building. While in use these chargers emit a noticeable fan-like noise from the base of the charger.



Figure 14: Tesla Superchargers and nearby building on Precinct Line near Target



Figure 15: Tesla superchargers

EVCS Fires

EV Charging Stations: An Accident Waiting to Happen

https://www.youtube.com/watch?v=_9ZwgzMG1bQ (July 2025)

This short video portrays the challenges faced by fire fighters when an EVCS fire breaks out.

“A few weeks ago [June 2025], an Electrify America charging station in Statesville, North Carolina caught fire. Crews showed up ready to work—but there was no way to shut off the power. Dispatch called Duke Energy and Electrify America six times. An hour later, no ETA, no plan, and critical equipment was still burning.

“This isn’t some isolated incident. Most EV charging stations have no clear emergency shutoffs and no action plans if something goes wrong. In this video, I’m walking through why this is happening, what’s changing in the codes, and why real safety improvements can’t wait until 2030.”



Figure 16: Charging station fire in North Carolina

EV Fire During Charging

This short video from China depicts an EVCS fire in a locality similar to Town Center. Note the space needed for firefighters to safely combat the blaze and surrounding property damage.

<https://www.youtube.com/shorts/m2mOBWPizBE>



Figure 17: Charging station fire in China

StachedD Fire Fighter EV Training

This is a comprehensive YouTube channel hosted by Patrick Durham, Fire Captain at Station 4 in the Troy Fire Department, Michigan, and a mechanical engineer specializing in lithium-ion battery and electric vehicle safety. He narrates numerous examples of the dangers posed by EVCS and EV batteries and what fire departments need to know.

<https://www.youtube.com/@StachedTraining>

Electric Vehicle Fires

An internal combustion engine (ICE) car fire takes somewhere between 750 and 1,000 gallons of water to put out. An EV fire can take 8,000 gallons or much more to be extinguished and can reignite later!

ICE car fire: 1,500 degrees F, once out it's out. It will not reignite.

EV fire: 5,000 degrees F, can reignite multiple times and up to days later.

EV fires shown here are unique as they occur in the absence of an accident and are due to the inherent instability of the 1,000 lb. lithium-ion battery carried in each car.

Tesla BURNS underwater

<https://www.youtube.com/watch?v=cUVZR7Olelk> (Oct 2023)

A Tesla Model X launching a jet ski in Hollywood, Florida, rolled down the ramp and into the salt water where it ignited and burned in the water. The car was allowed to burn itself out. However, the fire department had to load it on a special carrier and follow it with a fire engine to the salvage yard in case of re-ignition — which EVs have done after the initial fire. Two similar incidents, one with a hybrid battery, are discussed by a Fire Department Captain from Michigan. [His StacheD Training channel](#) depicts bus EV fires, Amazon van EV fires, and more from a mechanical engineer and fire fighter perspective.

The relevance to a proposed Keller EV charging station is that EV fires require extraordinary measures to extinguish. Where will the resources for that come from, who will pay, etc.? Who will be liable for injuries or property damages from EV fires?



Figure 18: Tesla burning in water off boat ramp

EV Hybrid bursts into an Inferno at Gatwick airport

<https://www.youtube.com/watch?app=desktop&v=Q8RFCWxFNFY&t=13s> (April 2025)

The vehicle is a 2024 Volkswagen Tiguan Plug-in Hybrid Electric (PHEV) with a 1.5 litre engine. It has a 19.7kwh battery and a 12 gallon gas tank.

This fire indicates that hybrids as well as full battery EVs are susceptible to thermal runaway of the lithium-ion battery. A battery fire, combined with a gasoline tank, is extremely dangerous. A 12 gallon tank would burn out quickly. The extent of this fire indicates the battery is burning.



Figure 19: Gatwick airport PHEW fire - April 2025

Homeowner questions EV safety after fire destroys her Nocatee, FL, home

<https://www.youtube.com/watch?v=SlpXkQhq1ps&t=2s> July 2023, 3 min. news report



This loaner EV fire ruined a home in Florida with damage totaling over \$1 million dollars. The owner was interviewed on a local news station. The loaner Mercedes Benz EV from the dealership was itself the subject of a recall because it may not alert drivers to a battery malfunction. It was not being charged when it burst into flames.

The St. Johns County Fire Marshall is urging EV owners to be aware of the risks associated with lithium-ion batteries. Home owner: "I would not recommend buying one [EV] anytime soon."

Figure 20: EV burning in Florida garage



Figure 21: Burned out EV in driveway with damaged home

Electric Car Starts Shaking And Then Bursts Into Flames On The Highway

<https://web.archive.org/web/20230512135229/https://washingtonengager.com/2023/05/electric-car-bursts-flames>

This man's comments in the news report indicates how close he may have come to losing his children due to an EV fire.



Figure 22: EV battery fire

“A resident from Elk Grove narrowly escaped a life-threatening incident when his Tesla erupted in flames while he was driving on Saturday.

“The victim, Bishal Malla, expressed gratitude for surviving the terrifying ordeal. Malla reported that he had been running errands nearby and was preparing to enter Highway 99 when he felt his car begin to shake.

Assuming it was a flat tire, he proceeded to investigate, but upon opening the door, he was met with smoke emanating from the vehicle's undercarriage.

“The smoke, he said, quickly turned into large flames. **He said he was acutely aware, however, of the two empty car seats in the back. I was about to go home, take the family and the kids, and go to a party,”** he said.

“Malla said it was hard not to wonder how this could have been different if his family had been in the vehicle at the time of the fire, remembering the extra minutes it takes to get the children out of their seats.

“I’m just speechless right now,” he said.” ...

“This sounds truly terrifying and it really makes you question the safety of electric vehicles.”

Tesla spontaneously combusts on California highway

<https://www.abc10.com/article/traffic/traffic-50-folsom-blvd/103-ee4bb857-f36b-438d-b763-1a710135b54c> Jan 2023



Figure 23: EV catches fire while driving on highway

“Sacramento Metro Fire crews arrived on scene to a Tesla Model S engulfed in flames. They say the **battery compartment spontaneously caught fire when driving at freeway speeds.**

“Officials say 6,000 gallons of water were used to extinguish the fire and cool the car battery.”

Chinese Electric Vehicles Are On Fire

<https://carnewschina.com/2022/04/18/chinese-electric-vehicles-are-on-fire/>



Figure 24: EV burning on road

NOTE that the majority of EV fires are NOT due to a collision in this report.

“Among the 86 reported fire accidents, the four main types of fire accidents were: fire while charging, fire while driving, fire while parked, and fire after a collision. Among those four types of fire accidents, excluding 7 accidents with unknown causes, **31 occurred while parked, 22 occurred during charging (including fires at charging piles), 20 occurred during driving, and 6 occurred after a collision with other objects. 38.5% of fire accidents occurred in a static state, and 27.5% of fire accidents occurred in a charging state, according to the Beijing Institute of Technology.**

“When an electric vehicle battery uses DC fast charging under an ultra-low temperature environment, if the electronic control system fails to preheat the battery, the battery is at risk of fire. Another cause of the fire is lithium carbonate precipitation and the formation of lithium dendrites in ternary lithium batteries and lithium iron phosphate batteries. The addition of relatively cheap electric vehicles to car-hailing fleets also represents an additional risk due to high usage and more fast charging.

“Additionally, 66% of the fires happen in the hot months of the year and 34% in the cold months. It seems that there is more risk of fire in winter when charging. In summer, there is more risk of fire due to overheating.”

While they were asleep, their Teslas burned in the garage

<https://archive.ph/viILM> (Washington Post, Aug 2021)



Figure 25: EV fire destroys home garage

“A fire inspector cited the thermal management system in one of the Tesla Model S sedans as one of two possible causes of the blaze, which showed what can happen when one electric car ignites another in a garage.” . . .

“Yogi and Carolyn Vindum were still asleep late last year when their Tesla Model S beamed an alert that charging was interrupted. Twelve minutes after that, they awoke to a blaring car alarm and a fire consuming their house in San Ramon, Calif. The blaze had started in one of the two electric vehicles in their garage and spread to the other.

“If we had lived upstairs in this house, we’d be dead,” said Yogi Vindum, a retired mechanical engineer.

“The fire, which has not previously been reported, is one in a string of recent examples showing what can happen when electric cars are left parked in garages to charge overnight. The issue is causing mounting concern as a number of electric-vehicle makers have warned owners not to leave the cars charging unattended in certain circumstances, or sitting fully charged in garages.

“Vindum eventually replaced the Teslas with a gasoline-powered Audi . . . The fire at his home changed his perspective on whether vehicle fires present a unique risk for owners of electric cars.

“Gasoline driven cars don’t catch fire in the garage when they’re sitting there. And that’s the difference,” he said. “I don’t worry about [my] Audi catching fire downstairs when it’s not running.”

Conclusion

The proposed Town Center EV charging station is ill advised for several reasons:

- The EVCS will reduce parking space by 25% in front of the west-facing retail shops.
- A Wal-Mart Supercenter just 2.3 miles away already contains four high speed DC chargers.
- Five EV chargers are unreasonable for this location
- The fire risk can be significant and must be considered.

About the Author

Michael (Mike) Sivertsen received an undergraduate degree in Physics from the University of Minnesota in 1979 and a Master of Knowledge Management degree from California State University, Northridge, in 2009. He earned a Certified Systems Engineering Professional (CSEP) designation from the International Council on Systems Engineering (INCOSE) in 2008. Mike has held numerous positions in three major industries (electric utility, IT, and aerospace). These have included: Health Physicist, Nuclear Engineering Instructor, Business Systems Analyst, Lessons Learned Project Engineer, and Systems Engineer. After his retirement in 2021 he served on the Board of Directors for a North Texas electrical co-op for three years. He can be reached at

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