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WILLIAM LIANG For The Times

JUSTIN SCHACTER admires a SuperAdobe during a tour at CalEarth, an educational campus and nonprofit organization in Hesperia.

Why some are looking to build 'SuperAdobes'

Since the L.A.-area fires in January, interest has increased in earthen architecture that's resistant to disasters

By Jessie Schiewe

At the southern edge of the Mojave Desert on an unusually warm Saturday in February, dozens of people mill about in the living space of a 2,300-square-foot, three-bed, two-bath house with a connected two-car garage.

A couple gliding past the open kitchen marvel at the room's "good natural lighting." In the hallway outside the expansive main bedroom, a tall bearded man compares the space to a "luxury Airbnb experience," while two grade-school-age boys play with a light switch on the wall, flicking the ceiling fan on and off.

"I've never seen a house like this," one of them says, "but I like the shape of it."

The house has central heating and air conditioning, a natural gas fireplace and ample closet space. And yet, modern amenities aside, this is no normal home.

Instead of resembling a box, the structure consists of a sequence of vaulted domes nestled together, like a lost cottage straight out of a storybook. The walls are curved and the ceilings are tall and arched. And the entire building is constructed with just a few materials: soil, water, sandbags, barbed wire, plaster and a bit of cement.

But what's most notable about this structure is something visitors can't see: The house is capable of withstanding a colossal natural disaster, whether that be a tornado, hurricane, earthquake or fire.

Welcome to Earth One, the piece de resistance at CalEarth, an educational campus and nonprofit organization in Hes-

[See **Earthen,** A8]

Law that shields migrants is facing new test

SB 54 held up despite efforts to overturn it. Now, Trump allies in California seek to undermine legislation.

BY ANDREA CASTILLO

WASHINGTON — Two days after Donald Trump won the 2016 election, California state Senate President Pro Tem Kevin de León canceled a flight to Germany and called his executive staff for a meeting.

They began to dissect the myriad ways Trump could "seriously hurt Californians" through policies and actions on the environment, freedom of choice and immigration.

The framework for landmark legislation on immigration — Senate Bill 54 — was born a few weeks later.

"We knew that we needed to do something to protect immigrants, and it wasn't just something on a social media platform or a hashtag," De León recalled. "We needed something with real teeth."

Across the country, immigration agents rely on state and local law enforcement to help them identify and arrest deportable immigrants. When SB 54 took effect in 2018, California became the first state to substantially divorce its law enforcement resources from federal immigration enforcement use. There were so-called sanctuary cities, but no sanctuary states.

Formally called the California Values Act, SB 54 is crucial to California leaders' efforts to "Trump-proof" the state. In Trump's first term, he tried and failed to overturn the law in court, but advocates worry that his new administration will encourage local governments to defy the law and that many residents remain at risk without more stringent protections.

The law is also held up by both supporters and opponents as an example of why sanctuary policies work, or don't. Its advocates say SB 54 stands out as the single law that has prevented the most deportations anywhere across the country.

[See **SB 54,** A10]

CARLIN STIEHL For The Times

AZUSENA FAVELA monitors her community last week for potential activity by federal ICE agents.

Neighborhood patrol is on lookout for ICE and immigrant rights

Coalition's goal is to spot federal agents in

flashing lights stopped near an intersection in the distance.

Unbuilt Huntington Park pool triggers graft inquiry

BY RUBEN VIVES

Back in 2019, plans were announced with much fanfare for an aquatics center with an Olympic-size pool for residents of the working-class city of Huntington Park. Officials hailed it as a major improvement.

"The aquatic programs will allow the community to unite for play, competition, fitness and learning at all ages. The community swimming programs will create a stronger relationship with the community, increasing access, public engagement and recruitment into higher education opportunities," the city said in its announcement.

But six years later, the center has still not been built

[See **Pool,** A10]

'IT'S SO SAD': Residents rebuke Huntington Park city officials. **CALIFORNIA, B1**

Musk chaos is a problem for Trump

President cheers him on, but a misstep could spell disaster, writes Doyle McManus.

PERSPECTIVES, A2

LIFESTYLE

‘My next home must be fireproof’: Why more Angelenos are looking to build ‘SuperAdobes’

Elliott Hostetter, who lost his Altadena home to the Eaton fire, steps out of a SuperAdobe during a tour at the CalEarth Institute. Such structures are capable of withstanding a colossal natural disaster. (William Liang / For The Times)

By Jessie Schiewe
Photography by **William Liang**

Feb. 20, 2025 3 AM PT

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Altadena resident Justin Schachter, whose home was deemed unlivable after the Eaton fire, admires a SuperAdobe structure during a tour at CalEarth. (William Liang / For The Times)

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BUSINESS

What to learn from rebuilding of Paradise after 2018 wildfire? Plenty, says top insurance executive

Jan. 30, 2025

But what's most notable about this structure is something visitors can't see: The house is capable of withstanding a colossal natural disaster, whether that be a tornado, hurricane, earthquake or fire.

Welcome to Earth One, the piece de resistance at CalEarth, an educational campus and nonprofit organization in Hesperia that, for the last three decades, has championed a building style known as the SuperAdobe.

In Los Angeles, such homes are not the norm now — but they could be. And according to natural building advocates, they may be the architectural solution for a more fireproof city.

The construction of SuperAdobes relies on the arch, a load-bearing shape. (William Liang / For The Times)

Once a month, the organization hosts an open house in which visitors can tour the campus' myriad earthen structures, which range from emergency shelters that can be erected in a day to the fully permitted, large-scale Earth One home.

Since the recent Los Angeles wildfires, there has been a spike in interest in natural buildings, particularly after a photo was shared on social media showing a backyard SuperAdobe that emerged from the Eaton fire intact, even as the 1912 home in front of it fell victim to the flames.

Most SuperAdobes are dome-shaped and their construction relies on the arch, a load-bearing shape that utilizes geometry to offset gravitational and seismic forces. But these structures are also infinitely customizable, capable of being expanded and stretched to one's desires. Homes can be connected to any city's electric grid and sewer line, and outfitted with the same creature comforts as any other modern-day abode.

Some buildings at CalEarth are used to study long-term effects of the elements on the designs. (William Liang / For The Times)

In a city preoccupied with prefab homes and mixed-use housing developments, it can be hard to grasp the feasibility of living in a place made from just a few natural materials. That's why more than 100 people gathered at CalEarth's February open house: to see these structures in person and determine if they'll be the right fit for their project, be it a wellness center, a backyard playhouse for their kids, a compound to live in with their friends, or the home they'll build back after losing their previous one in the fires.

"A lot of people are really rushing to rebuild and that's concerning," says attendee Elliott Hotstetter, a resident of Altadena who lost his home in the Eaton fire. "We need to have enough time to build back right. I'm looking at everything and considering all options, but my next home must be fireproof. That is the main consideration."

CALIFORNIA

L.A. wildfire resource guide: How to stay safe, what to do and how to help

Feb. 3, 2025

CalEarth's SuperAdobe design has been studied by NASA and endorsed, as well as used, by the United Nations. The structures have been built in 60 countries worldwide, but they are rarely utilized as lodging in the U.S., particularly in California, where CalEarth board members Dastan and Sheefteh Khalili believe they can make the most difference.

"The thing is, we're not just starting from zero. We know it works and we have the technology," explains Dastan, who has been running CalEarth alongside his sister since 2008 after the death of their father, Nader Khalili, the founder of the organization.

Dastan Khalili, right, is the president of CalEarth, and his sister, Sheefteh, is the organization's chief financial officer. (William Liang / For The Times)

"If everyone comes together at this moment, it could be an incredible opportunity to build these neighborhoods back with safe, fireproof housing that also works in harmony with nature," Dastan adds. "It could make Los Angeles a beacon for the country that would revolutionize housing to be safe from climate change."

Iranian expat Nader started CalEarth to provide quick and affordable housing for homeless and impoverished people. Inspired by his travels in the Iranian desert, he devised a structure that could be built using both soil from the immediate area and prolonged exposure to fire to make it impervious to the elements. The final result of his experiments was the SuperAdobe, a coiled dome of earth-filled sandbags reinforced with barbed wire. Structures are coated in plaster to ensure they are waterproof — CalEarth claims there is no time limit to how many years, decades or centuries a SuperAdobe can last.

CalEarth has a long-standing practice of offering its online building curriculum for free to people who have been affected by natural or man-made disasters. Since the start of January's wildfires throughout Southern California, the organization has seen a 131% increase in the number of people viewing its videos.

On-site workshops as well as apprenticeship programs are also offered at the Hesperia campus throughout the year. The blueprints for the SuperAdobe are open source. There is no patent for the design — an intentional move on CalEarth's part as it seeks to share this knowledge "at the service of humanity and the environment."

Andrew Martz examines a window. SuperAdobe homes are infinitely customizable. (William Liang / For The Times)

Internationally, SuperAdobes have been constructed not just as homes and backyard offices, but as island resorts, women's health clinics and orphanages. What's more, these structures have endured the most extreme natural events. A SuperAdobe in Nepal survived 7.3 and 7.8 earthquakes that leveled surrounding towns in 2015; in Puerto Rico, one survived Hurricane Maria in 2017; and multiple SuperAdobes

emerged unscathed from the 40-day Thomas fire that plagued Ventura County in 2017-18.

CalEarth hasn't just pioneered this form of earthen architecture — it has gone to great lengths to make sure the structures have the qualifications they need to become viable living units. The SuperAdobe has International Code Conference approval as a form of adobe architecture, and the organization is working on getting the structures International Residential Code approval next.

CalEarth is not the only organization that has sensed an opportunity in the aftermath of the Southern California wildfires. Architect Ben Loescher of Loescher Meachem Architects Inc. feels cautiously optimistic about a comeback for fireproof earthen buildings in the region.

"In the wake of these fires, we no longer have an excuse — we have to look for new ways of doing things. One of those new things is rediscovering earth as a building material," says Loescher, who has long championed adobe architecture and runs the advocacy and educational organization adobeisnotsoftware.

"Fortunately, we know a lot more about adobe than we did 50 years ago. It can be classified, tested and engineered just like any other building material."

Justin Schachter examines a sink inside a SuperAdobe. Homes can be connected to any city's electric grid and sewer line. (William Liang / For The Times)

Adobe — as both an earthen building material and earthen style of construction — has been in Southern California for hundreds of years, dating back to the Spanish missions and proliferating as recently as the 1920s in Los Angeles' former Sonoratown, as well as throughout Santa Barbara County. Many adobes can still be found in Los Angeles to this day, including the Ávila Adobe on Olvera Street, widely considered to be the oldest house in L.A. at 207 years old, and the little-known Gilmore Adobe hidden in plain sight between the Grove and the Original Farmers Market.

In addition to the fireproof qualities of building with earthen materials, adobes have other strong characteristics that strengthen the argument for reintroducing them into the City's architectural fold. They are quick to build and can be constructed at considerably lower costs than most modern-day homes.

By utilizing the earth as a building material, they offer environmental benefits as well. Fewer building materials need to be shipped, leading to a reduction in carbon emissions during transport, and when or if a wildfire burns through a neighborhood, fewer toxins are released in the air, leading to better air quality and less smoke damage for residents whose properties weren't lost to the fires.

That's one of the main reasons why Justin Schachter, an Altadena resident whose home was deemed unlivable after the Eaton fire, decided to attend CalEarth's open house.

"When I heard about this, I wasn't sure if I wanted to drive two hours to Hesperia," says Schachter, who works as an electrical engineer at NASA's Jet Propulsion Lab. "I'm still displaced. I've been moving around days to weeks at a time, and I'm exhausted. My landlords just quit my lease and I've got toxic stuff that I have to move out. But I'm glad that I did come if only to better understand that if our homes weren't made of bulls—, the stuff that didn't burn wouldn't have been so affected."

LIFESTYLE

What trees survived in our terrible fires? And why didn't they burn?

Feb. 1, 2025

Building back Los Angeles' fire-destroyed neighborhoods with natural materials would make sense financially — the cost of building a SuperAdobe is roughly one-third the price of building the same size home using conventional architecture. And, even within that cost, the majority of it is labor. But the process wouldn't necessarily be easy. Due to California's seismic activity, the state has some of the strictest building standards in the world, which makes it challenging for homeowners to get building plans approved. However, it's not impossible, as the SuperAdobes already built within the state prove. It just takes time, resources and back-and-forth with the city's building department, which is something Pacific Palisades resident Marysia Miernowska is hoping to change.

Last month, Miernowska launched a Change.org petition urging the city of Los Angeles to rebuild using fire-resistant, natural building technologies. It calls for updated building codes and the funding of widespread, engineer-approved plans to make the complicated permitting process easier for individuals to navigate. It also advises financial incentives for natural building projects within L.A. County, along with investments in research, educational courses and outreach programs. To date, the petition has received nearly 5,000 signatures.

“I have been amazed by how many engineers, architects, builders, artisans, as well as regular people wanting healthy homes, have reached out to me,” Miernowska says. “Fires are part of our natural ecosystem and L.A. is ready to rebuild differently.”

As the attendees of CalEarth’s February open house filter through the inviting living spaces of Earth One, that certainly feels true. One visitor has plopped down on the living room couch, fingers intertwined behind their head as they gaze up at the tall ceiling, while a gaggle of women in the guest bedroom marvel over the depth of the built-in closet. Although this space looks nothing like the listings crowding Zillow, it’s one that more people are imagining themselves coming home to.

“If we build our houses back the way they were, they’re just going to burn down the next time and that doesn’t really make sense,” says Hostetter, who has plans to return for a building workshop with his son. “The world has used earth materials in architecture for a long time. This is a good opportunity to really take a minute and make some smart decisions.”

Elliott Hostetter, who lost his home to the Eaton fire, plans to take his time when it comes to rebuilding. (William Liang / For The Times)

More to Read

Could this Irvine neighborhood be the blueprint for a more fire-resistant L.A.?

Feb. 19, 2025

Opinion: California's housing problems require a better solution than densify, densify, densify

Feb. 18, 2025

People used to buy homes through catalogs. Could that idea help Altadena?

Feb. 18, 2025

Jessie Schiewe

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