

A photograph of a modern, single-story house with large, multi-paned windows and a flat roof with dark wood trim. A large, mature tree with a thick, textured trunk stands in the foreground on the left. The house has a light-colored exterior and a wooden deck with steps leading up to it. A blue square logo with the text 'FTF ENGINEERING' is overlaid on the image.

FTF
ENGINEERING

RESIDENTIAL QUALIFICATIONS

FIRM PROFILE



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FTF Engineering is a structural and civil engineering firm dedicated to the art and discipline of designing exceptional homes. We partner with architects, builders, and clients to bring ambitious designs to life through thoughtful engineering that enhances architecture rather than constrains it. Our work is guided by integrity, technical excellence, and a collaborative spirit that supports creativity at every stage of design and construction.

Our high-end residential practice is informed by decades of experience across commercial, institutional, and civic projects, an interdisciplinary foundation that allows us to approach each home with a broader design perspective. This cross-sector expertise enables us to develop inventive yet practical structural solutions that balance aesthetics, performance, and constructability.

With in-house civil engineering, FTF offers a seamless approach that integrates site, structure, and environment. Our team's ability to coordinate grading, drainage, storm water systems, and erosion control early in design ensures continuity from concept through completion, increasing efficiency and adding long-term value for clients and project partners alike.

With offices in San Francisco and San Luis Obispo, FTF serves projects throughout California, from the North Bay through the Central Coast to Los Angeles, delivering engineering that elevates design.

YEARS OF FIRM EXPERIENCE

23

NUMBER OF EMPLOYEES

20

LBE/SBE STATUS

LBE City of San Francisco -
CMD 122415518

SBE (Micro) State of California -
Certification No.: 2000037

LEGAL STATUS

S Corporation

CITY AND COUNTY OF SAN FRANCISCO VENDOR NUMBER

19839

IRS EMPLOYEE ID NUMBER

TID# 54-2071216

APPROXIMATE NUMBER OF PROJECTS COMPLETED TO DATE

1,200



PASO ROBLES LAW RESIDENCE

Location: Paso Robles, California

Size: 7,810 sf

Architect: BAR Architects

General Contractor: Specialty Construction, Inc.

Set in the Adelaida vineyard district, the Paso Robles Residence is set into the hillside with a basement wine room and entertainment area with a barrel ceiling and exposed concrete walls. The upper floor is split into two wings, maximizing the views and integrating outdoor space. The building features multiple construction materials to complement the surrounding topography and enhance the finishes and textures. A combination of exposed board-formed concrete walls, steel cantilever columns and moment frames, Simpson Strong walls, rock-covered CMU walls, and plywood shear walls were all incorporated into the lateral force-resisting system. In addition, the roof features elevated cantilevered roofs at each suite that are supported by flush-framed steel beams. Steel posts tie the high roof sections to the low roof to connect the lateral systems. FTF worked closely with BAR Architects to coordinate all the structural elements using a 3-D Revit Model that was integrated into the architect's 3-D model to ensure all the elements and finishes fit together seamlessly.









LOS GATOS HIGHLANDS RESIDENCE

Location: Los Gatos, California

Size: 4,877 sf

Architect: Mark Horton Architects

General Contractor: Lencioni Construction

The new construction of this modern home set in the hills above Silicon Valley highlights exposed cantilevered concrete walls and warm wood finishes. A unique element of this house was the design of a second-floor interior glass bridge. Working collaboratively with the architect to realize the owner's vision, we designed the bridge and large skylights above to bring light to the partially buried firstfloor level. FTF designed purposefully placed concrete shear walls and prominent steel collectors to allow the architect to celebrate the views with full glass walls. The house steps down the hillside on a grade beam and pier foundation designed to mitigate the expansive soils found on site.









ATHERTON RESIDENCE

Location: Atherton, California

Size: 10,400 sf

Architect: Aleck Wilson Architects

General Contractor: Moroso Construction

Designed as a family compound in the upscale community of Atherton, this multi-building residence consists of a main house, a separate pool cabana, and a garage. Architecturally the design takes inspiration from surrounding topography, with primary spaces framing expansive views out into the landscape. Structurally this translates into strategically placed steel moment frames that allow for large openings and expansive interiors as well as robust designs for wind and seismic loads. One of the home's most striking features is an oversized dining room and adjacent great room. Both have large openings to the exterior, with outdoor fireplaces and gathering areas.









SAN CARLOS RESIDENCE

Location: San Carlos, California

Size: 4,400 sf

Architect: Aleck Wilson Architects

General Contractor: RJ Campi Construction Inc.

FTF partnered with Aleck Wilson Architects and RJ Campi Construction Inc. on this dramatic contemporary hillside home above a San Carlos canyon. Visually, the architects created a canyon within the compound, designing two buildings, one for public spaces and one for private space, joined by a pair of bridges taking advantage of the San Francisco Bay views. The residence was an engineering achievement because of the challenging site and access, and the client's desire for exterior concrete walls that are exposed both inside and out. The California Energy Code requires a thermal break in exterior walls, so FTF, in collaboration with the contractor, developed an insulated wall system with a thinner veneer wall attached to a thicker structural wall but separated by rigid insulation that met energy efficiency requirements. The team's method for pouring the two-story board-formed concrete walls saved time and money compared to other alternatives.

Click [here](#) to read the *CA Home + Design* article about this fire-resilient home.









RUSSIAN HILL RESIDENCE

Location: San Francisco, California

Size: 6,800 sf

Architect: Butler Armsden Architecture

General Contractor: Crown Construction

This Russian Hill residence was originally built in 1908, just two years after the devastating San Francisco earthquake. After more than 100 years of use, the house needed to be remodeled and fully seismically retrofitted. The architect Lewis Butler asked our design team to provide a creative structural solution that would work with the oversized glass windows and maximize the expansive views of the city and the Bay. Our team embraced the challenge and created an elegant and safe seismic force-resisting system utilizing a three-story steel moment frame at the front façade and a four-story steel moment frame that extended to the new penthouse roof, maximizing the panoramic views. Because the moment frames needed to be hidden within the walls and floors, our team carefully selected the frame members working closely with the architect to conceal the frames without compromising the seismic performance. In addition to providing seismic safety beyond the building code requirements, the steel moment frames also allowed for an interior modern openspace concept with a Venetian-plaster helix spiral staircase that twists through the three top stories of the four-level home.









HILLSBOROUGH RESIDENCE I

Location: Hillsborough, California

Size: 9,600 sf

Architect: Studio VARA

General Contractor: Dijeu-Poage Construction

Reinterpreting an addition on the back of an older house in Hillsborough, the front half of the house was maintained, while the rear was thoroughly modernized down to the last detail. Following the basic form of the original house, clean lines, open floor plan, and a façade that opens to the expansive yard were all executed with modern materials and details. Careful engineering resulted in a re-use of the existing foundations from the addition, and minimal use of steel framing except where long spans needed to be accomplished in shallow floor plates. A sculptural pool house compliments the design of the addition, and the pool acts as a centerpiece to tie the two expressions together.







COW HOLLOW RESIDENCE

Location: San Francisco, California

Size: 5,100 sf

Architect: Butler Armsden Architects

General Contractor: Dijeu-Poage Construction

Originally constructed in 1902, the Cow Hollow Residence project involved a significant remodel and included a two-story rear addition to an existing four-story Craftsman. The project captured full use of the home's existing basement by lowering the floor in the rear of the building and adding a two-story addition that offered exterior living and entertaining spaces, and a more graceful transition from the home to the back garden. By locating a single, large moment frame to align with the upper floor of the addition, FTF kept the structural work to a minimum while still delivering a complete seismic upgrade.









PORTOLA VALLEY RESIDENCE I

Location: Portola Valley, California

Size: 4,600 sf

Architect: Thayer Hopkins Architects

General Contractor: SEA Construction

Set within a tranquil Portola Valley landscape, this modern residence of linked pavilions draws from traditional Japanese architecture to create a seamless connection between interior and exterior spaces, harmonizing with heritage oaks, redwoods, and a seasonal creek. Beneath its tranquil setting, the project presented significant geotechnical challenges. The San Andreas Fault line crosses the property's front yard, where liquefiable soils posed high seismic risks. FTF Engineering developed innovative structural solutions to enhance the home's resilience beyond code requirements. The foundation features a 12-inch thick concrete mat slab reinforced with a grid of 30-inch deep concrete beams, designed to resist seismic movement and stabilize the structure against potential soil failure. The result is a residence that blends elegance with strength—an energy-efficient, light-filled retreat grounded in robust structural engineering. FTF's advanced seismic design approach ensured smooth approval through the rigorous Portola Valley Building Department process. Click [here](#) to read the *CA Home + Design* article about this Portola Valley Modern Retreat.









ORINDA RESIDENCE

Location: Orinda, California

Size: 6,844 sf

Architect: Butler Armsden Architects

General Contractor: Buestad Construction, Inc.

The project involved a remodel and a full seismic retrofit of an existing single-family residence located in the Orinda Hills and originally built on a steep, stabilized old landslide deposit. FTF collaborated closely with the architect from the early stages of design to achieve an economical and robust structural system that complements the architectural design. Key remodel design features include an open-concept floor plan and maximized openings overlooking the property at the eastern 20-foot-tall main level façade wall. We achieved a higher seismic performance level under the latest building code using only plywood shear walls and a single one-story steel moment frame. Based on the results of our 3D computer analysis, the existing building's concrete grade beam and pier foundation were discretely supplemented with two new concrete piers. Click [here](#) to read the *New York Times* article on this spectacular residence.









MILL VALLEY RESIDENCE

Location: Marin County, California

Size: 6,500 sf

Architect: Quezada Architects

General Contractor: Nestler Construction

The Mill Valley Residence, located on the eastern slope of Mount Tamalpais in Marin County, is a 6,500 square foot modern home designed to integrate seamlessly into a steep and wooded hillside. The project features articulated volumes and clean lines that minimize visual impact while maintaining expansive views of the surrounding landscape. Extensive cuts into bedrock—up to 20 feet deep—were required to create a stable foundation, leading to the use of tall retaining walls and advanced geotechnical coordination to secure the home into the terrain. FTF Engineering provided the structural design, developing drilled pier and grade beam foundations supported by steel moment frames, cantilevered columns, and strategically placed plywood shear walls. Three-dimensional modeling was used to analyze the complex foundation and retaining systems, allowing the team to avoid oversized footings or tiebacks. Steel beams minimized floor and roof depths over large spans, enhancing openness and the indoor-outdoor connection central to the design.











PORTOLA RESIDENCE II

Location: Portola Valley, California

Size: 5,350 sf

Architect: 2M Architecture

General Contractor: Matarozzi Pelsinger Builders

Located just over 1 mile from the San Andreas Fault on a steeply sloped and wooded hillside in the Portola Valley Hills, this custom home offers expansive views of the entire Bay Area. The architectural design included an open floor plan with tall ceilings, oversized glass walls, a long cantilevered deck, and a roof with a large oculus. Taking into consideration the topography and the architectural challenges of this three-story building, FTF designed an advanced lateral force-resisting system that consisted of thirteen steel brace frames with viscous fluid dampers, manufactured by Taylor Devices Inc. Our innovative approach greatly increased the seismic performance of the structure with only a small overall construction cost increase.

Click [here](#) to read the *STRUCTURE* magazine article about this advanced seismic structural design of steel braced frames with viscous dampers.



CONTACT US

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