



VERTECH ENGINEERING, INC.

Project List

Residential / Affordable Housing Projects:

- **FAIRWAYS AT SAN ANTONIO COURT**, (Office of Jerome King, AIA, Affirmed Housing Group), San Jose, CA: 91,000 square foot, three story wood framed building over 120 ft X 420 ft post tensioned concrete podium structure.

Value Added:

- Foundations: VerTech Engineering worked at the beginning of the design development phase with the Architect and Geotechnical Engineer in order to justify a limit to soil remediation and extra stiff foundation requirements. The result was a much thinner mat slab and a reduction in the amount of reinforcing in the podium slab netting a savings to the owner.
 - Construction Administration: The project came under intense review by the building department with an unexpected -secondary plan check during construction after substantial completion of the primary framing. A team of eleven engineers from the building jurisdiction made a thorough review of the as-built conditions indicating that many conditions would need to be corrected to meet newly adopted requirements costing the owner both time and materials in order to meet the new demands. VerTech Engineering immediately responded to the inquisition meeting every query with substantial evidence of acceptability, and defending the as-built conditions with additional design documentation to secure the clients interests.
- **OSPREY COVE**, (Cathexes, VandenBergh Development) Lake Almanor, CA, 27 Unit Lakeside Condominium Complex
 - **20th STREET HOUSING**, (Full Circle Design Group) San Jose, CA: Domestic Violence Shelter
 - **SOUTH SECOND STREET**, (Rob Wellington Quigley, FAIA/First Community Housing), San Jose, CA: 142,000 square foot, 4 story wood framed building over 2 levels of post tensioned concrete parking and mixed use podium structure.





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- **1460 N. 4TH STREET APARTMENTS**, (Fisher-Friedman Associates, AIA/First Community Housing), San Jose, CA: 160,000 square foot, 7 story structural steel-special moment frame building over 2 story post tensioned concrete podium structure. Low income housing above with mixed use and parking below.




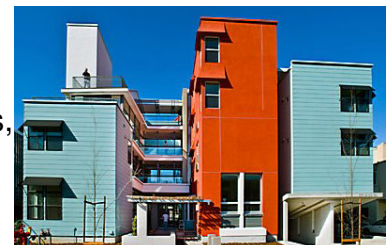
Value Added:

- Design Acceptability: Due to the nature of the buildings use, it was decided to incorporate a mix of lateral force resisting systems to meet the architectural needs regarding the floor plan and layout, and the strength requirements. After preliminary review by the building authority it was deemed an appropriate method and design proceeded. By the time we received plan check comments, the same mix of systems had since been rejected by the jurisdiction on similar type projects costing those owners considerably. We defended our design by both immense calculation effort and obtaining the recommendation of world renowned experts in the sub-fields of seismic design pertaining to our project. The system was accepted, leading to an official re-interpretation of code policy for the jurisdiction.
- **BAY AVENUE APARTMENTS**, (Office of Jerome King, AIA/First Community Housing), Capitola, CA: 88,000 square foot, 3 story wood framed structural renovation and site redevelopment.
- **GATEWAY APARTMENTS**, (Office of Jerome King, AIA), Salinas, CA: 75,000 square foot, 4 story wood framed building over post tensioned podium slab with subterranean parking.



Value Added:


- Foundations: By implementing liquefaction considerations into the design of the podium structure, VerTech Engineering was able to save nearly a million dollars from the construction budget due to proposed soil remediation efforts.
- **CASA FELIZ**,  LEED GOLD, (Rob Wellington Quigley, FAIA/First Community Housing), San Jose, CA: 32,000 square foot, five story structure with mat slab foundations, one level of post-tensioned concrete for below grade parking. Structure above is four levels of timber framing.






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- **VILLA MONTGOMERY**,  LEED GOLD, (Fisher Friedman Associates, AIA/First Community Housing), Redwood City, CA: 120,000 square foot, six story structure with mat slab foundations, 2 levels of post-tensioned concrete for below grade parking and first floor commercial/retail use. Structure above is four levels of timber framing.



Value Added:

- The Villa Montgomery project had been designed by another Structural Engineering firm when we first were introduced to the project team. The construction budget was too high and the team needed a fresh perspective on the design to save construction dollars. By modifying certain design approaches and using alternate methods, our design proposal provided a system which reduced construction costs by nearly a million dollars.
- **GISH RD. APARTMENTS**,  LEED GOLD, AIA TOP TEN, (Office of Jerome King, AIA/First Community Housing), San Jose, CA: 63,000 square foot, five story structure with mat slab foundations, 2 levels post-tensioned concrete for below grade parking and commercial/retail use and 3 levels of timber and steel framing above.



Value Added:

- The geotechnical data suggested the whole site be remediated with pressure grouting to limit liquefaction settlement. By using structural characteristics of the superstructure to span localized failures of the subgrade, remediation efforts were greatly reduced at no net cost to the owner.
- **POLLARD PLAZA**, (Office of Jerome King, AIA/EAH Housing), San Jose, CA: 91,000 square foot, four story light gauge metal stud framed building with post tensioned podium slab and below grade parking.
 - **BETTY ANNE GARDENS**, (Office of Jerome King, AIA/First Community Housing), San Jose, CA: 85,000 square foot, three story wood framed structure with post tensioned slab on grade foundations and structural steel first level framing to accommodate parking at first level.



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- **EL PASEO STUDIOS**, (Office of Jerome King, AIA/First Community Housing), San Jose, CA: 42,000 square foot, four story wood framed structure with post tensioned wood shear walls and structural steel framing over post tensioned podium slab with concrete shear walls and subterranean parking. Unique and award winning architecture provide intriguing structural layout.



Value Added:

- The post tensioned podium slab for this project followed a triangular plan which proved very difficult to reinforce with conventional tendon patterns. In order to minimize the reinforcing VerTech incorporated a horizontal sweep into the tendon layout to reduce the amount of reinforcing by 40%. The layout was rejected by the building jurisdiction, but VerTech Engineering was able to convince the building authority with ample hand calculations and letters from industry experts enough to accept the design. To this day the project remains the most complicated PT slab we've designed, and possibly the easiest to build.
- **THE COURTYARD**, (Office of Jerome King, AIA/Community Housing Developers), East Palo Alto, CA: 103,000 square foot, four story wood framed building with post tensioned podium slab and below grade parking.

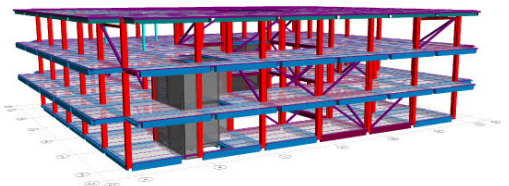


Medical Projects:

- **ARROYO GRANDE COMMUNITY HOSPITAL**, (SDG Architects, Inc.) Arroyo Grande, CA: 8,000 square foot acute care addition and 7,500 square foot retrofit to existing wood framed wing.
- **BURLINGAME SURGICAL CENTER**, (SDG Architects, Inc.), Burlingame, CA, Structural retrofit for 46,000 sq ft surgical center remediation.

Value Added:

- The project was noted to have required a fully integrated seismic retrofit including foundations for the 1960's concrete building built on deep piles. VerTech Engineering was able to integrate an offset-frame system utilizing the existing structural elements and foundations in order to reduce the projected construction costs by roughly 70% of original projections.





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- **CAMPBELL SURGICAL CENTER**, (SDG Architects, Inc.), Campbell, CA: Renovation of existing 70,000 sq. ft. steel structure for OSHPD specifications to surgical center use.
- **ENLOE HOSPITAL**, Chico, CA: Equipment attachment designs and light infill framing design.
- **GLENN MEDICAL CENTER**, (RGA Associates) Glenn County, CA: Equipment support.

Commercial Projects:

- **NANTUCKET WAREHOUSE**, (TJ Glenn Architects, Nantucket Home Furnishings), Chico, CA: Seismic upgrade and structural rehabilitation for modified use of 12,133 sq.ft. garage warehouse facilities.
- **BASCOM OFFICE BUILDING**, (Barry Swenson Builder), San Jose, CA
- **BRISTOL SQUARE COMMERCIAL/RETAIL COMPLEX**, (Pat Cole, Architect), Chico, CA
- **SKYWAY MEADOWS PLAZA**, Paradise, CA, 12 unit mixed use complex.
- **GRAND VIEW BUILDING-240 MAIN STREET**, Chico, CA: Internal structural steel, second-floor addition and seismic upgrade to historic 1920's concrete post and beam with un-reinforced masonry infill type construction.
- **JOSHI COMMERCIAL BUILDING COMPLEX**, Eaton Rd, Chico, CA
- **LUBE EXPRESS**, Esplanade, Chico, CA
- **5TH AND IVY COMMERCIAL REDEVELOPMENT**, Chico, CA
- **NORTH VALLEY PLAZA REMODEL**, Chico, CA
- **HEARST PARKING GARAGE REMODEL**, San Francisco, CA, Structural renovations to existing 10 story concrete parking garage.



Educational Projects:

- **SPRINGFIELD MONTESORRI SCHOOL**, Dublin, CA, 15,800 sq.ft. wood framed school building.
- **LOMA VISTA SCHOOL SPECIAL EDUCATION BUILDING**, (Thomson and Hendricks Architects), Chico, CA, 3,075 sq. ft. wood framed school building.





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- **VALLEJO MONTESORRI SCHOOL**, Vallejo, CA, 16,000 sq.ft. wood framed school building.
- **CHICO HIGH SCHOOL SHOP SHADE STRUCTURE**, Chico, CA
- **CHICO JUNIOR HIGH SCHOOL**, Chico, CA: Bathroom and hallway addition.
- **CONCOW ELEMENTARY SCHOOL WELLHOUSE**, Concow, CA
- **CHICO HIGH SCHOOL**, Orland, CA: Modernization designs.
- **BIGGS HIGH SCHOOL**, Biggs, CA: Modernization designs.
- **MILL STREET SCHOOL**, Orland, CA: Modernization designs.
- **ORLAND HIGH SCHOOL**, Orland, CA: Modernization designs.
- **SEQUOIA UNION HIGH SCHOOL**, 30' X 30' Shop Building, Redwood City, CA
- **MOFFATT BIBLE COLLEGE DORMITORY AND LIBRARY**, Kijabe, Kenya: 3 Story stone block educational facilities.

Civic Projects:

- **CATALYST DOMESTIC VIOLENCE SERVICES CENTER**, Chico, CA Single story steel and wood framed structure.
- **ORLAND FARM SANCTUARY**, Orland, CA: Large animal rehabilitation shelter and clinic.
- **ENEAN THEATER**, (Fisher Friedman Associates, AIA/City of Pittsburgh), Pittsburgh, CA, Historic theater building-seismic retrofit with full exterior structural shell and architectural improvements.



Value Added:

- The theater was brought to VerTech after having been addressed by another Structural Engineering firm. VerTech was able to reduce the proposed construction to roughly 70% of the original design, substantially reducing construction costs for the renovation.



- **GUINEA BRIDGE**, Guinea, West Africa: 320' structural steel bridge design and construction in remote jungle area.
- **CALIFORNIA WATER CO. FLUME** (CA State Department of Water Resources), Oroville, CA
- **BUS TRANSFER STATION**, Chico, CA: Exposed steel truss and masonry transfer station facility.



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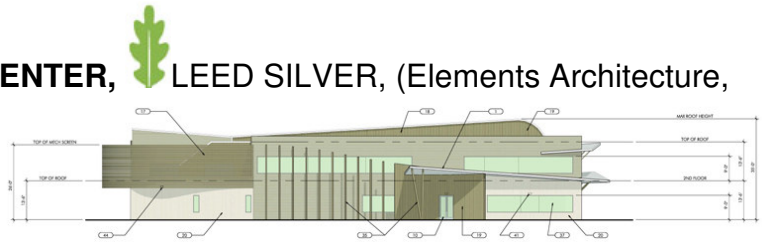
- **CHICO FIELD HOUSE EXPANSION**, Chico, CA: Expansion of existing masonry gymnasium to include restroom and storage facilities.
- **BUTTE COUNTY COURTHOUSE SEISMIC RETROFIT**, Oroville, CA: Provided analysis and seismic retrofit scheme to save \$1.5 million from previous upgrade scheme.

Value Added:

- The Butte County Courthouse had been reviewed by another Structural Engineering firm and found to be substantially under strength requiring a \$1.5 million strengthening. VerTech Engineering made a thorough review of the existing documents and those reports indicating the required work, and presented an alternate case for acceptance under current code requiring only a few weld-reinforcements at existing frames.
- **BUTTE COUNTY COURTHOUSE EIFS**, Oroville, CA: Analysis and design for full cladding of external insulated finish system.
- **CAL PINES COMMUNITY CENTER**, Cal Pines, CA: Single story community center.
- **CAL TRANS CANNON GUNNERY**, Meyers, CA: Snow removal and avalanche control cannon facility.
- **DURHAM MEMORIAL BUILDING**, Durham, CA: Retrofit and upgrade to existing masonry and wood structure.
- **GRIDLEY RECREATION CENTER**, Gridley, CA: Renovation and addition to existing wood framed structure.
- **ESPLANADE HOUSE**, Chico, CA: Conversion of motel to community homeless shelter.

Other Projects:

- **CHINO AIR OPERATIONS CENTER**,  LEED SILVER, (Elements Architecture, Southern California Edison)
36,498 sq ft airport and hangar facilities.
- **SHOWERS OF BLESSINGS CHURCH**, Sacramento, CA
- **CALVARY CHAPEL CHURCH**, Chico, CA
- **BLACK STALLION WINERY**, Napa, CA
- **GREY FOX WINERY**, Oroville, CA
- **ADM SILO CONVERSION**, Arbuckle, CA





VERTECH ENGINEERING, INC.

Green Design Experience

- LEED Accredited Professional Certification
- A long-standing expertise and incorporation of sustainable products and alternative materials into our projects including SIPS, straw bale structures, ICF, 3D panels, pre-consumer cementitious materials, etc. . .
- We have established close and reliable relationships with cutting edge-panelized frame fabricators, environmentally conscious Builders, Developers, and Architects.
- We maintain a continual focus on efficiency in design, not only in our primary field, but in peripherally related fields throughout the design process.
- Project history includes many LEED certified projects including a project nominated as AIA Top Ten Green Projects for 2009.



Gish Apartments (Office of Jerome King) Winner of 2009 COTE AIA Top Ten