



**STG Design Build**

SERVICE BROCHURE

# Structural Engineering

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Safe, stable, and code-compliant structural solutions engineered by licensed California professionals for residential and commercial projects.



**949-942-4448**

[info@stgdesignbuild.com](mailto:info@stgdesignbuild.com)

10650 Reagan St #923, Los Alamitos, CA 90720



THE FOUNDATION

# Structural Integrity Is Not Optional

Every building stands or falls on its structural design. In seismic-active California, structural engineering isn't just about meeting code – it's about protecting lives, investments, and your project timeline. STG delivers structural solutions that pass plan check, withstand seismic forces, and optimize construction costs.

## Who It's For

- ✓ Homeowners adding rooms, ADUs, or remodeling
- ✓ Developers building multi-family or commercial
- ✓ Contractors needing engineering support
- ✓ Property owners with structural concerns



**400+**  
PROJECTS

**Zone 4**  
SEISMIC ZONE EXPERTISE

**PE**  
LICENSED PE ENGINEERS

## ENGINEERED OUTCOMES

# Why Structural Engineering Matters



## Occupant Safety

Designs that protect lives against seismic events, wind loads, and structural failure.



## Code Compliance

Full California Building Code compliance with proper load calculations and documentation.



## Cost Optimization

Efficient structural systems that minimize material costs while maintaining safety.



## Constructability

Designs that consider construction methods, reducing field complications and change orders.



## Permit Confidence

Complete calculations and stamped plans that building departments approve efficiently.



## Long-Term Value

Structures designed for decades of performance, protecting property value and reducing liability.



## ENGINEERING SCOPE

# Comprehensive Structural Solutions

Our structural engineering services encompass every phase of your project, from initial analysis through construction support.

## Foundation Design

Spread footings, continuous footings, mat foundations, and deep foundations designed for California soil conditions and seismic requirements.

## Framing Systems

Wood framing, steel framing, and hybrid systems engineered for gravity loads, lateral forces, and constructability.

## Load Calculations

Complete gravity and lateral load analysis including dead, live, seismic, and wind loads per current California Building Code.

## Connection Design

Holdowns, straps, brackets, and custom connections ensuring complete load path continuity from roof to foundation.

## Seismic Analysis

Lateral force-resisting systems including shear walls, moment frames, and braced frames designed for California seismic demands.

## Deliverables

- Foundation Plans & Details

- Structural Sections & Elevations

- Load Calculations & Analysis

- Engineer's Stamp & Signature

- Framing Plans (Floor/Roof/Wall)

- Connection Details & Schedules

- Seismic Design Documentation

- Construction Support & RFI Response



## ENGINEERING PROCESS

# From Analysis to Approval

A proven six-step process that delivers stamped structural plans on schedule and ready for permit.

1

**Review & Analysis**

Review architectural plans, soil reports, and site conditions to establish structural requirements and identify design constraints.

2

**Structural Design**

Develop foundations, framing, and lateral force-resisting systems that meet code requirements and optimize construction efficiency.

3

**Calculations & Analysis**

Detailed structural calculations for all loads and connections, ensuring every element meets California Building Code requirements.

4

**Construction Documents**

Stamped structural plans, details, and specifications ready for permit submittal and construction.

5

**Permit Support**

Coordinate with building departments, respond to plan check comments, and resolve any engineering questions during review.

6

**Construction Support**

Field observations, RFI responses, and construction phase engineering to ensure design intent is maintained through completion.



PROVEN PERFORMANCE

# Structural Engineering in Action

Selected projects showcasing our structural engineering expertise across residential remodels, conversions, and additions.



**FULL REMODEL**

## Los Angeles, CA

Complete structural redesign requiring foundation work, new framing systems, and seismic upgrades for a full home transformation.



**GARAGE CONVERSION**

## Harbor City, CA

Structural modifications converting garage space into habitable living area with proper load paths and code-compliant framing.



**FULL REMODEL**

## Pine St, Los Alamitos, CA

Comprehensive structural engineering for full home renovation with additions, including new foundation elements and upgraded lateral systems.



**KITCHEN REMODEL**

## Mulberry Drive, Whittier, CA

Structural support for wall removals and load redistribution in a major kitchen expansion requiring new beams and posts.



OUR ADVANTAGE

# Why STG for Structural Engineering

- **Licensed California Engineers**  
Professional Engineers with extensive California seismic zone experience and deep knowledge of local building codes.
- **Seismic Expertise**  
Hundreds of projects engineered in California's demanding seismic zones, delivering designs that protect lives and property.
- **Design-Build Coordination**  
Structural design integrated with architecture and construction for seamless project delivery.
- **Responsive Service**  
Timely RFI responses and field support during construction, keeping your project on schedule.
- **Quality Assurance**  
Shop drawing reviews, site observations, and design intent verification throughout the construction process.



## Rober Khalil

### Founder & CEO

With over a decade leading complex design-build projects, Rober founded STG Design Build to bridge the gap between design vision and engineering reality. His deep understanding of structural systems, construction methods, and California's seismic requirements ensures every project is engineered for safety, buildability, and long-term performance. Rober's hands-on approach means structural coordination happens at the design table, not in the field, eliminating the costly surprises that plague traditional project delivery.

GET STARTED

# Structural Confidence Starts Here

Whether you need a foundation design, seismic retrofit, or complete structural engineering package, our licensed engineers are ready.

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