

AJIISS

Structural Engineering
Plano, Texas, USA

Tel: 214-432-1032; Fax: 801-751-7888

info@ajiiss.com ; www.ajiiss.com

PROFILE

Structural Engineering and Associated Services

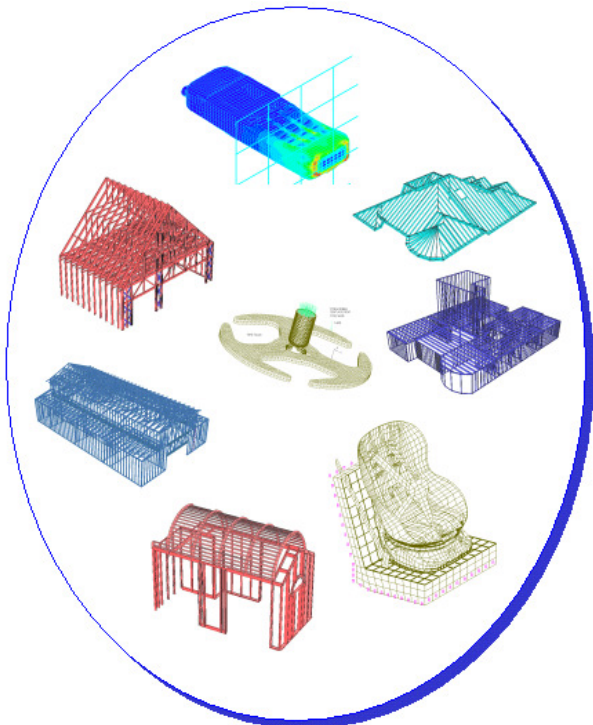
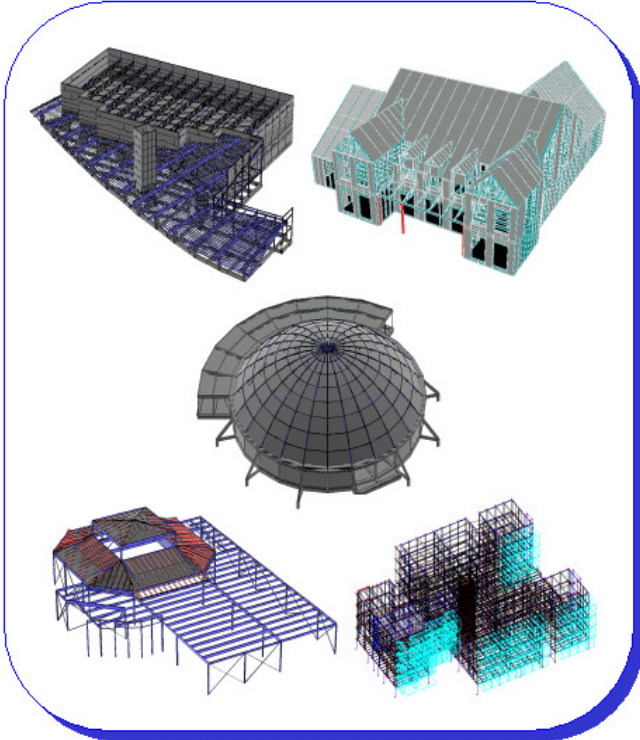
AJIISS Structural Engineering specializes in forensic engineering consulting and structural engineering analysis and design. Since 1998, the firm has been providing structural engineering services that started in Japan and now in the United States. Projects were located in the states of Texas, Florida, Georgia, Alabama, Louisiana, California, Missouri, New York, Massachusetts, Rhode Island, Oklahoma, Oregon, Tennessee, and Virginia.

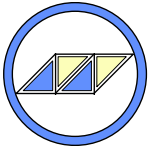
Projects include commercial, institutional, industrial and residential. Active involvements include analyses of building / non-building structure collapse/damage assessments; investigation of structural failures that were caused by hurricanes, windstorms, water intrusion, snow, fire, hailstorms, foundation movements, and faulty construction. Structures consisted of buildings, towers, bridges, residences, seawalls, piers, and other structures. Structural analyses projects include communication tower, dome type building, car seat, mobile phone impact resistance, press fit analysis, and soil-pile interaction simulations for power plant structure.

Damage evaluation experience includes faulty foundation and superstructure analysis for building structures. Experience in cause and origin investigations consists of storm damage due to hail, wind, wave, hurricane, tornado, and lightning; flooding, impact damage, construction vibrations, improper construction, plumbing leaks, moisture intrusion/leaks; structural damage due to fire and vehicle accidents, floor tile chips, and site drainage issues. Has also performed evaluations on multiple pitched and low-slope roofs of commercial and residential buildings to assess damage to roofing materials which include asphalt shingles, modified bitumen, built-up asphalt roofing, metal panels, concrete, clay, asbestos-cement, fiber-cement, synthetic (rubber, plastic) tiles, metal shingles/shakes, wood shakes, polyvinyl chloride (PVC), ethylene propylene diene terpolymer (EPDM), and thermoplastic polyolefin (TPO); Civil engineering experience includes bridge design and bridge structural damage evaluations.

STRUCTURAL ENGINEERING SERVICES

- Forensic Investigation
- Structural Design and Analysis
- Building frame & foundation design
- Value Engineering & Feasibility Studies
- Design Review & Plan Checking
- Research and Development
- Home Building Design and Innovation





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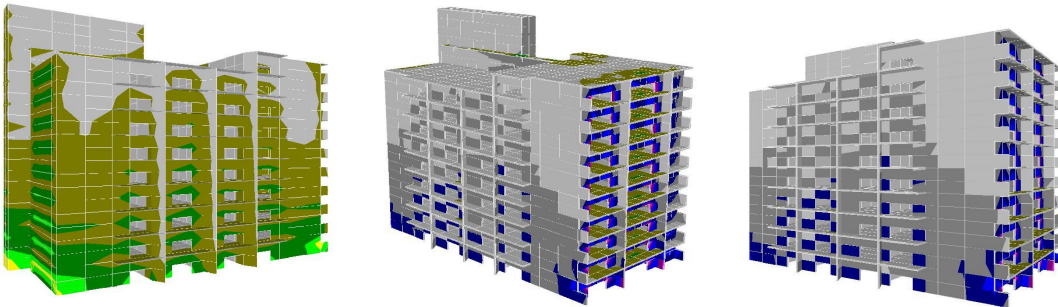
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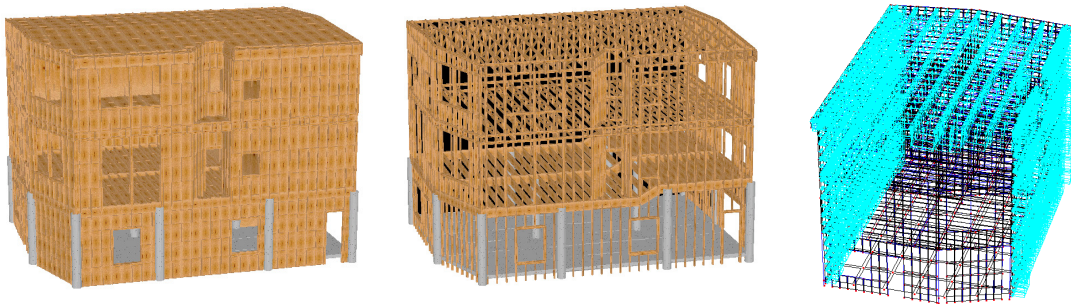
Structure Analytical Models

Structural Engineering and Related Services

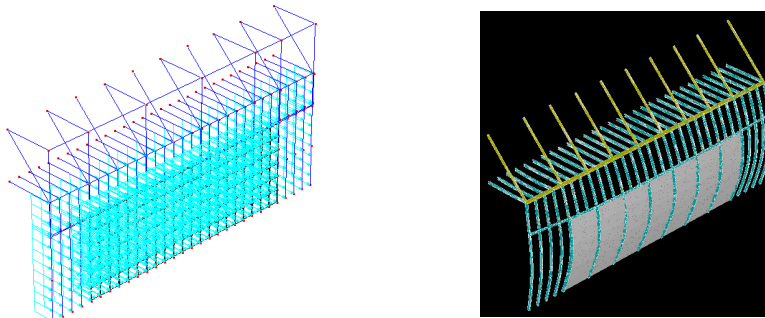
Sample Models Used in Design, Analyses, and Forensic Investigation



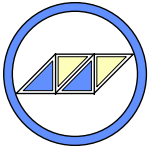
To determine if torsion on building occurred due to wind pressure



To investigate the effect of hurricane-related wind forces to the residence



To analyze the collapse of storefront wall systems

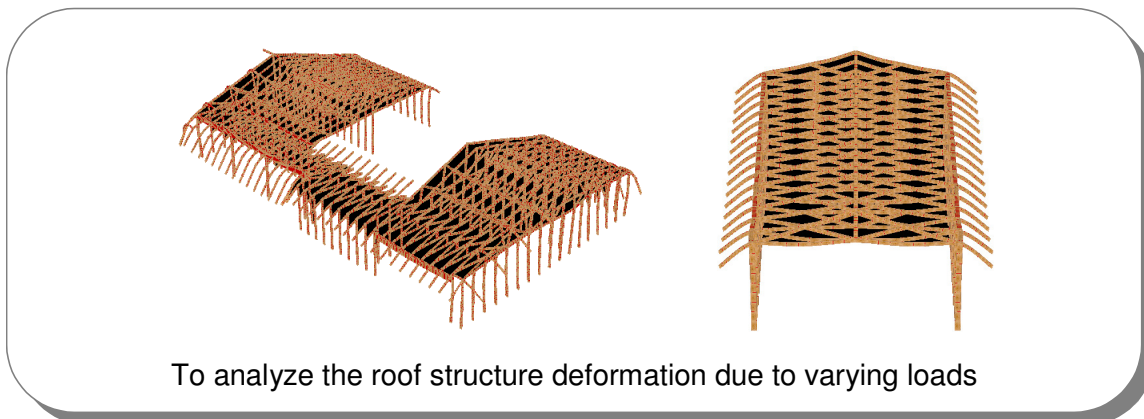
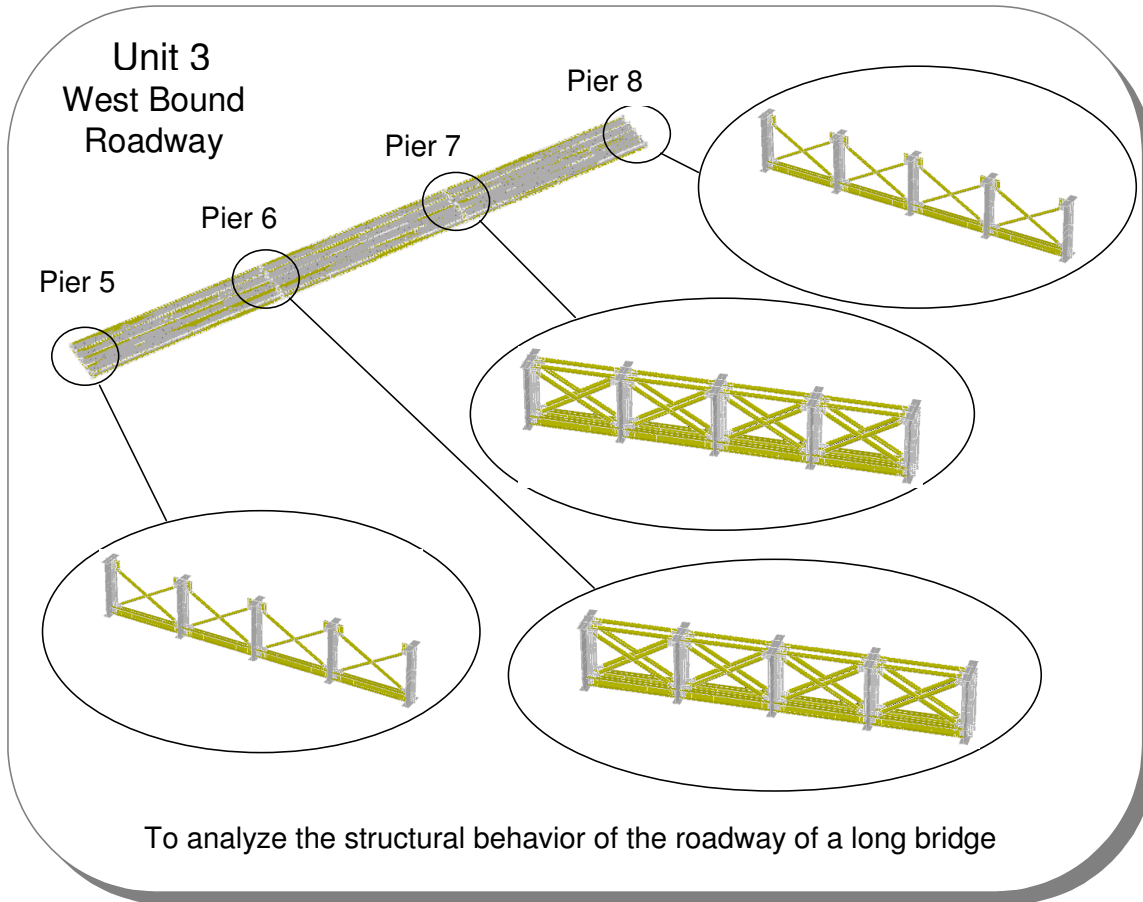


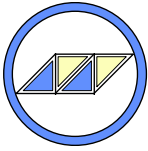
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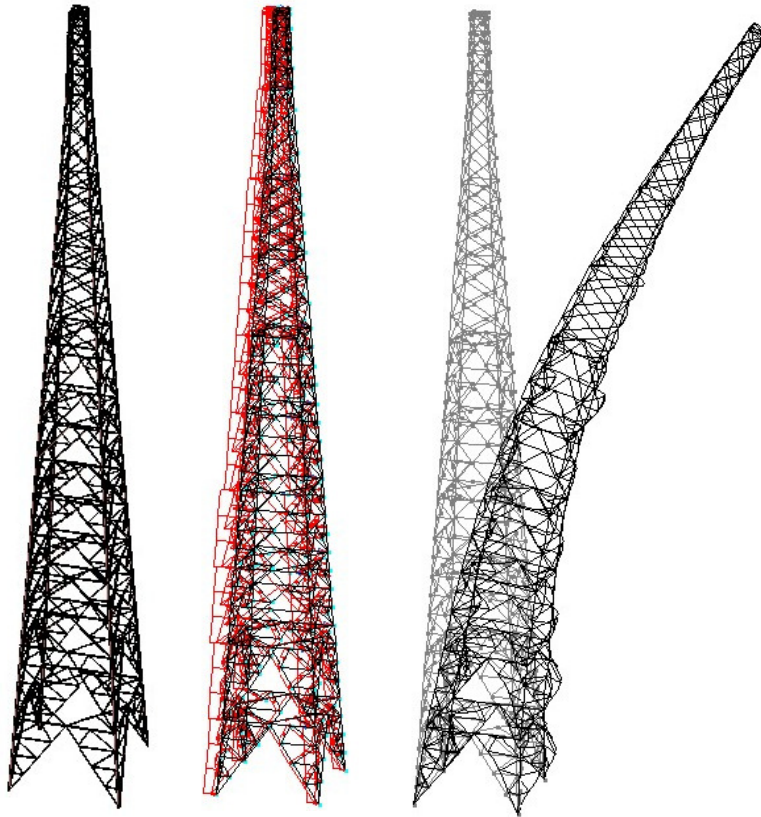


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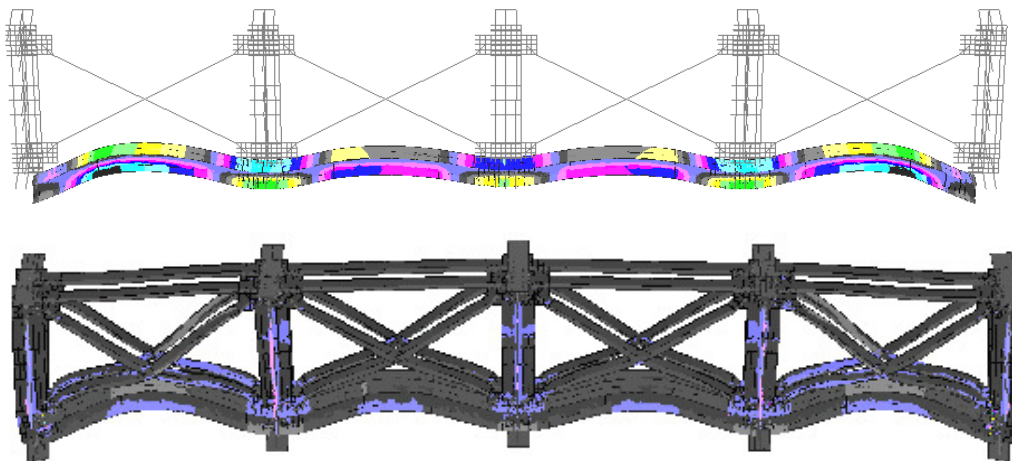
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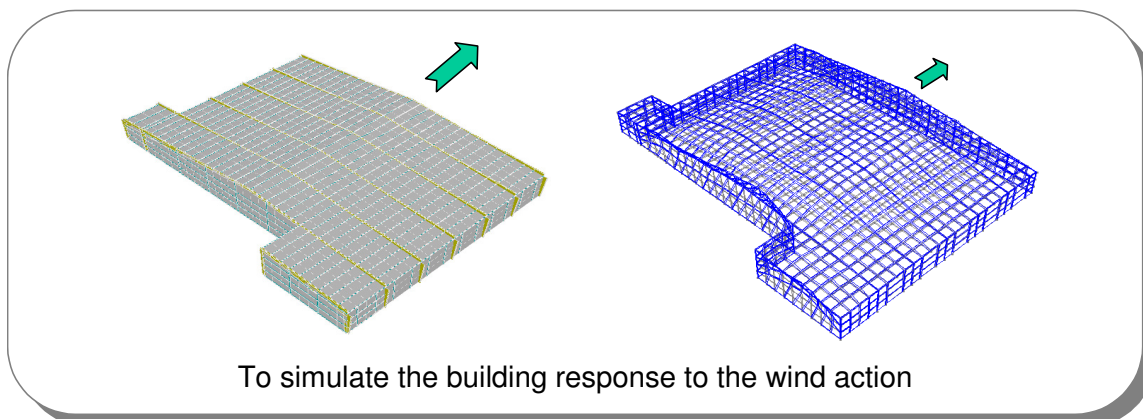
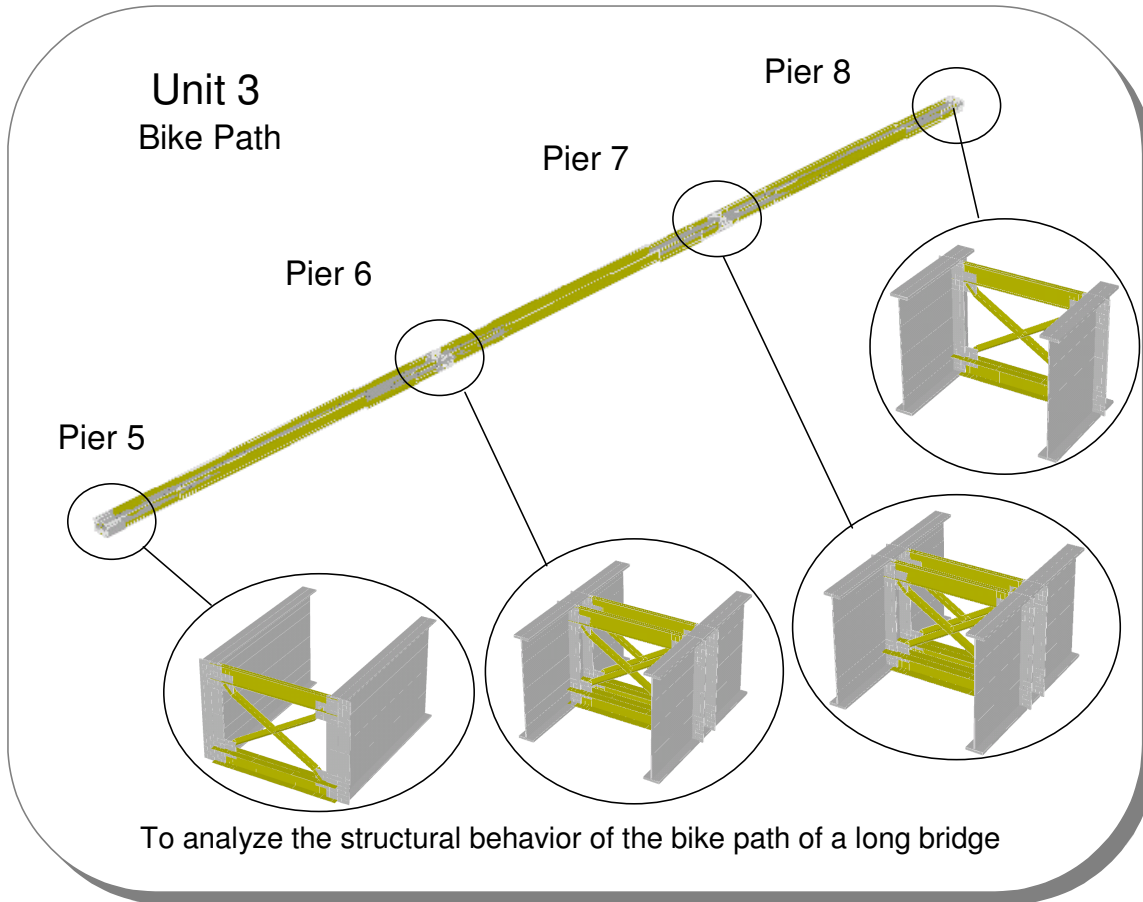
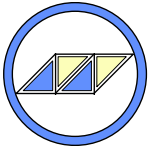
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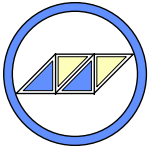


304-ft Tower Collapse Analysis



To analyze the cross beams for jacking and the cross bracings of a bridge



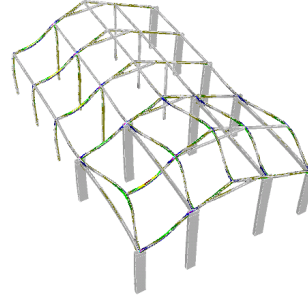
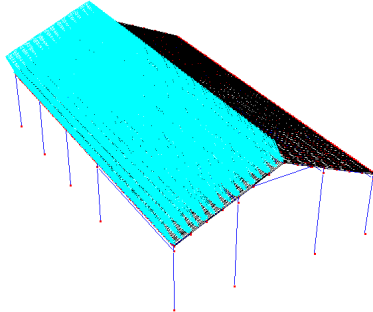


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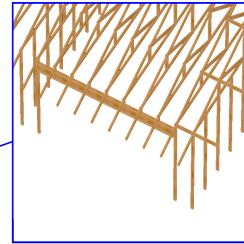
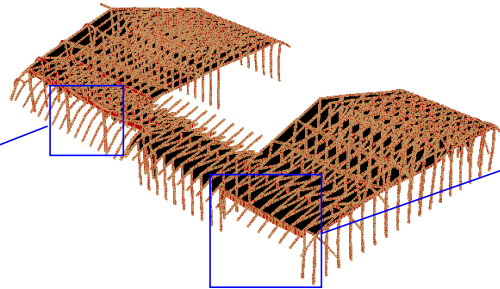
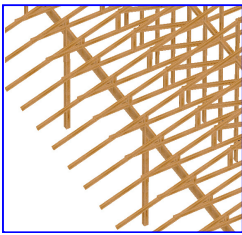
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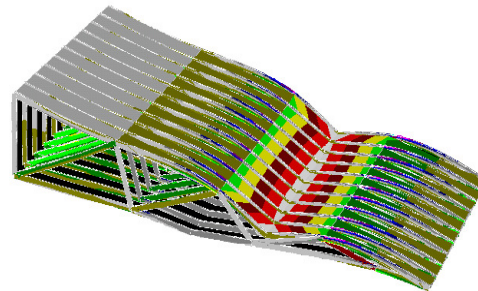
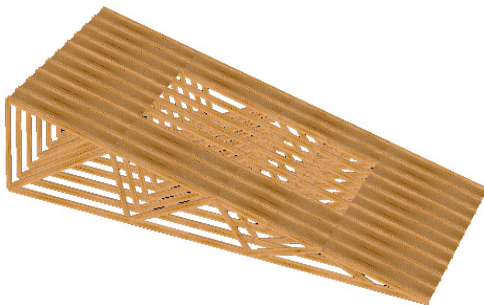
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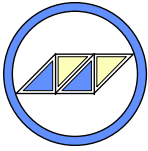
To determine if the damage was caused by the wind or a moving vehicle



To determine the deflections of roof structural members



To analyze the behavior of truss members with joints on the top chords

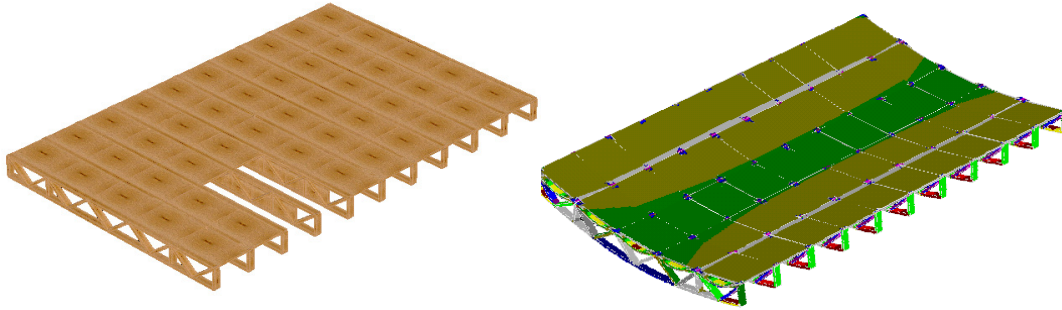


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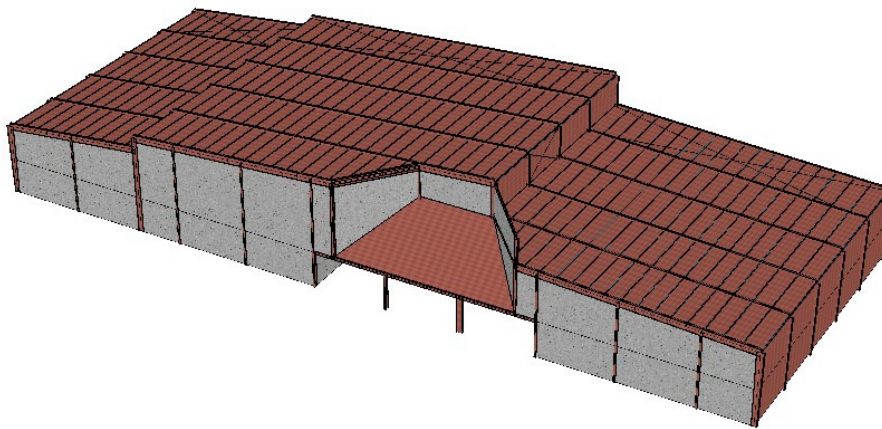
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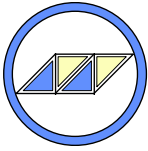
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To determine the floor deflection due to live loads



To investigate the structural resistance of a church building against wind

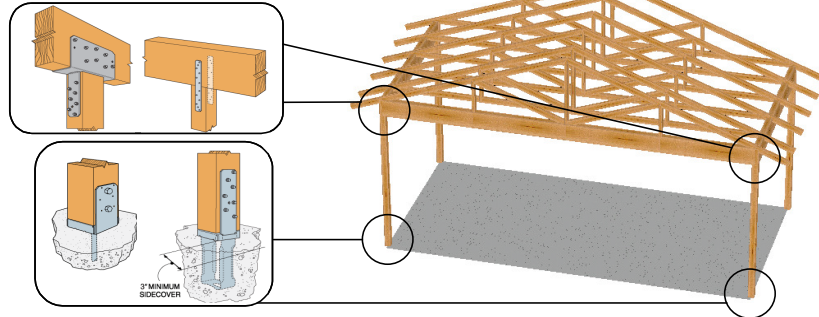


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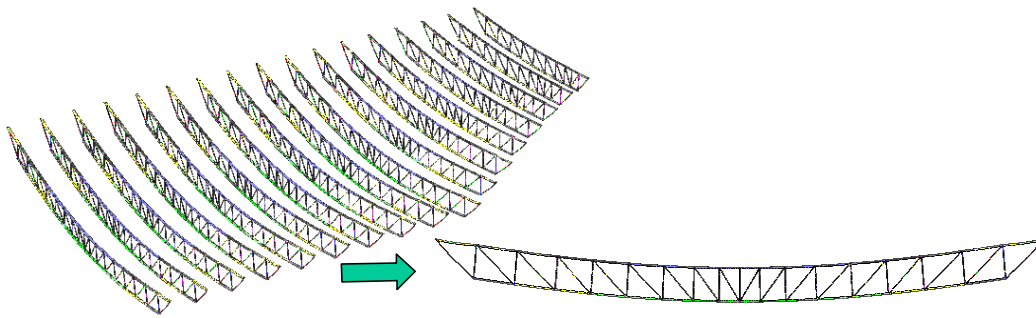
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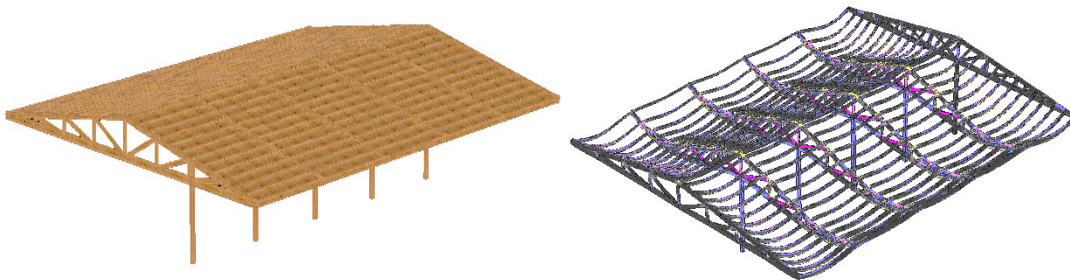
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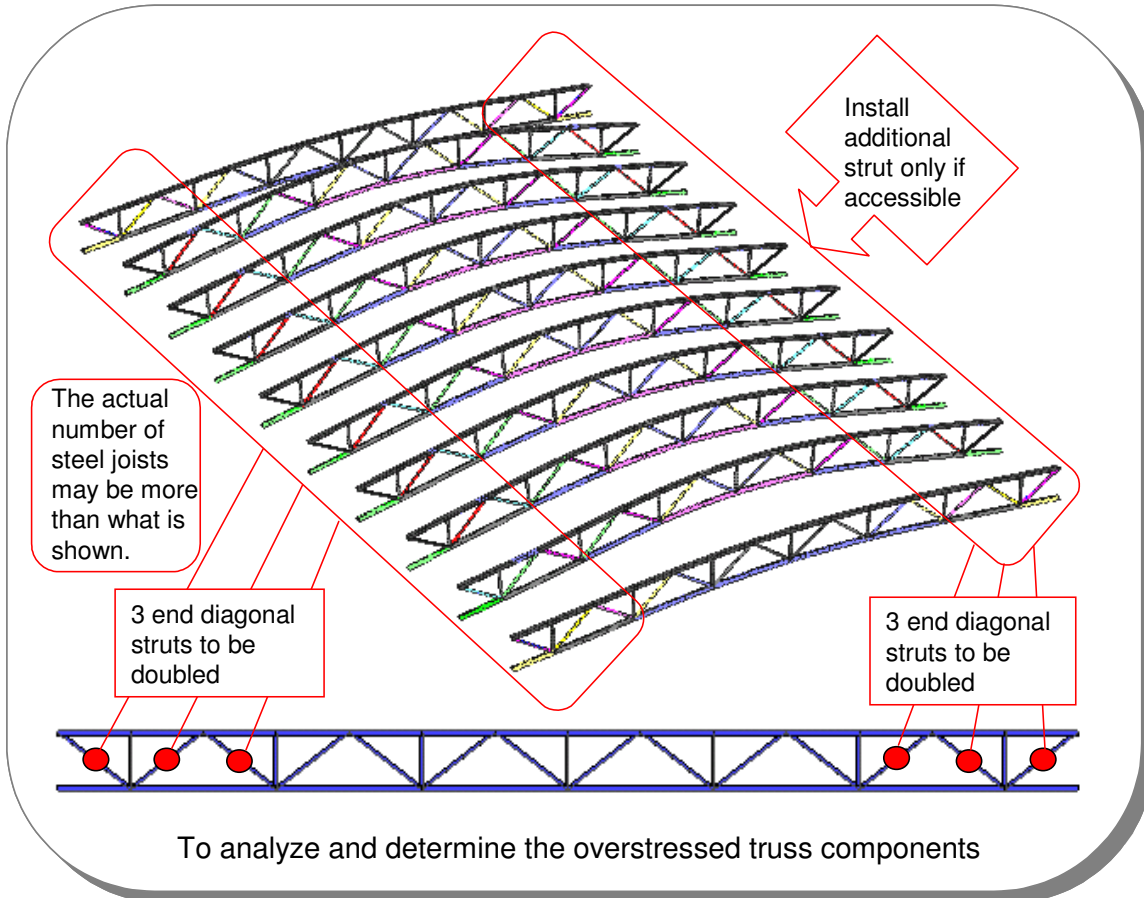
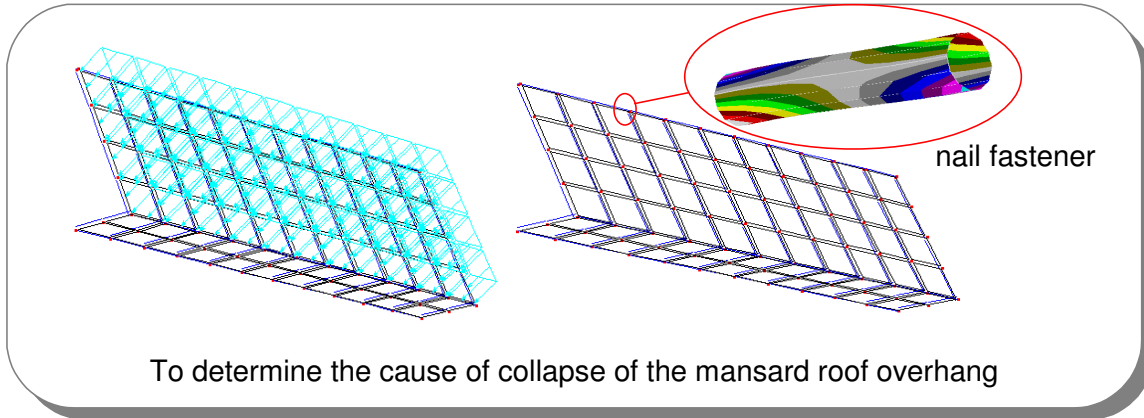
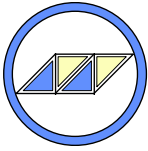
To analyze and retrofit a roof system

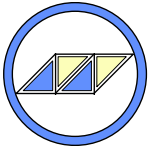


To determine the capacity of the steel roof joists



To analyze the behavior of the roof when subjected to wind pressure



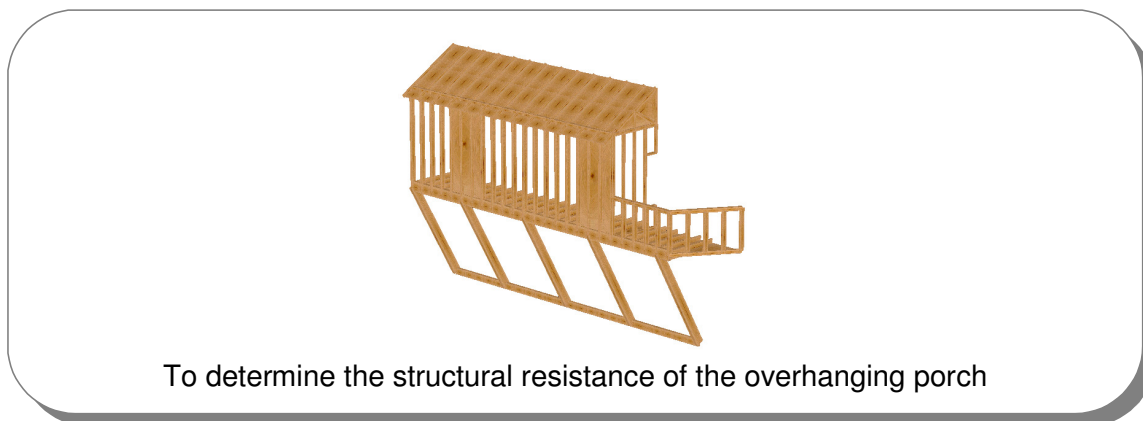
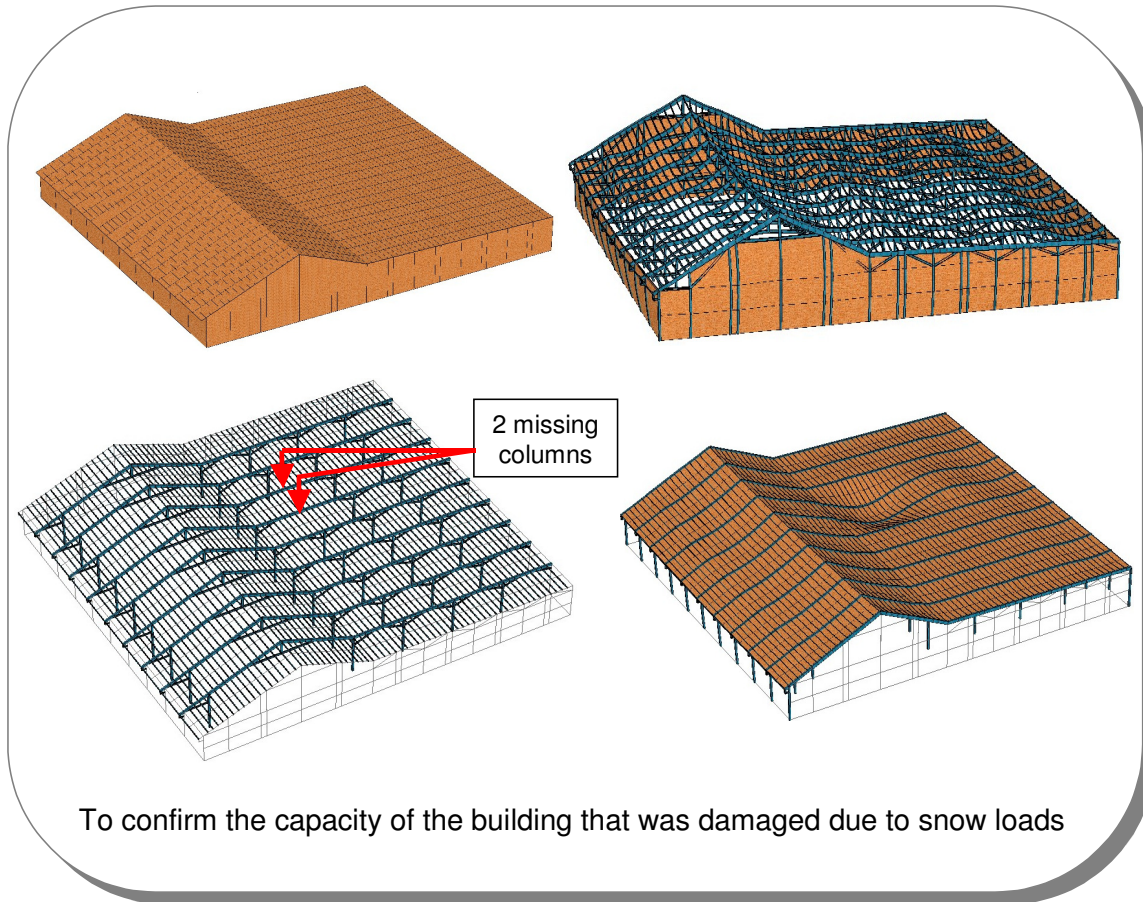


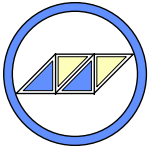
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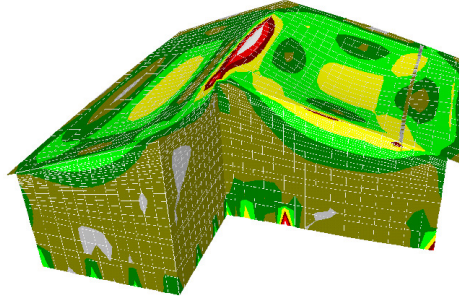


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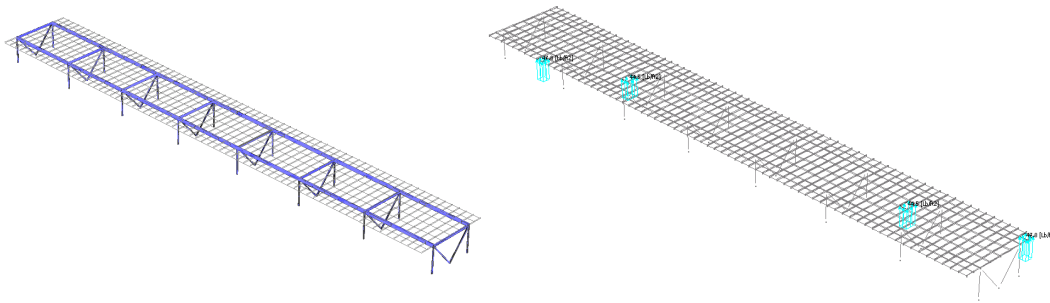
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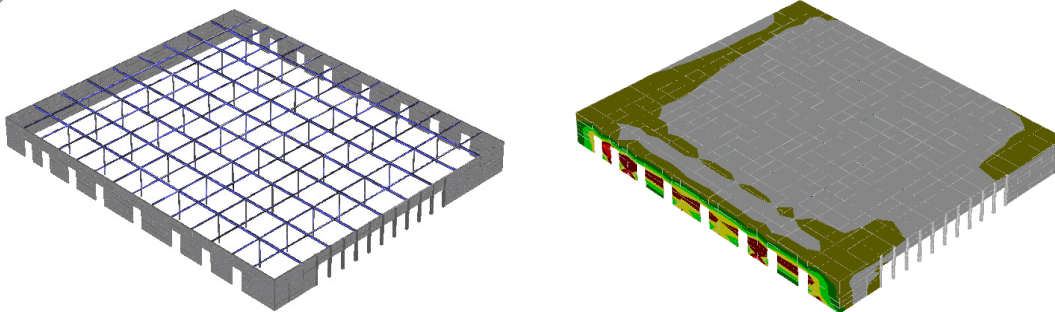
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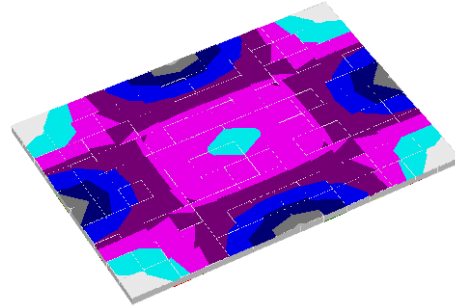
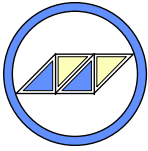
To analyze the stress distributions on the concrete roof of a residence



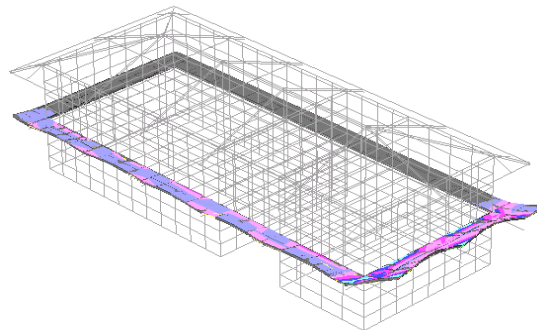
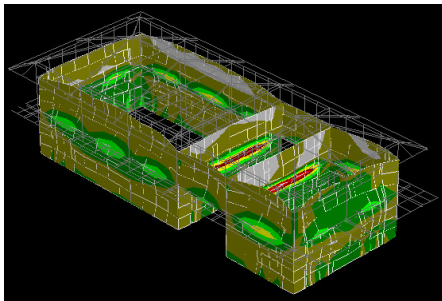
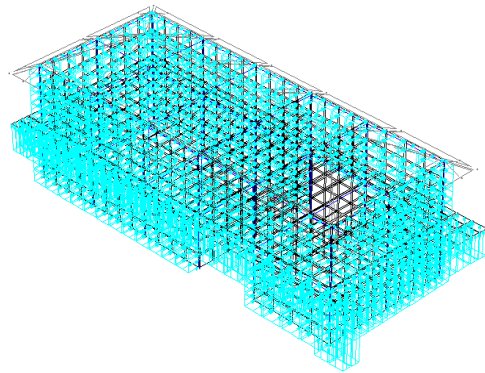
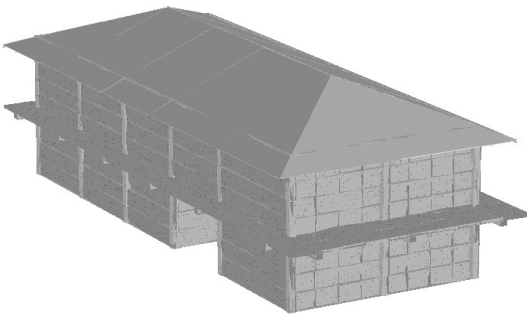
To determine the wind resistance of the car porch roof



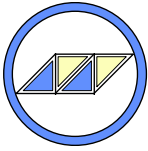
To determine if the wind compromised the structural integrity of the building



To investigate the stresses in the concrete floor slab



To simulate the behavior of the residential building against wind

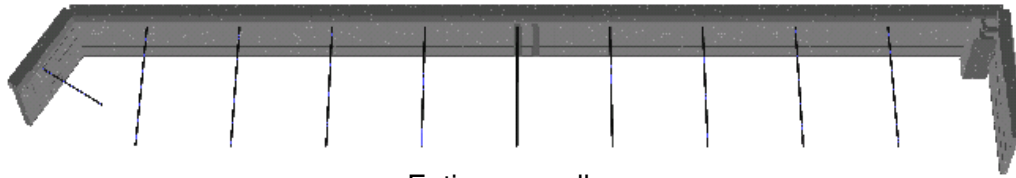


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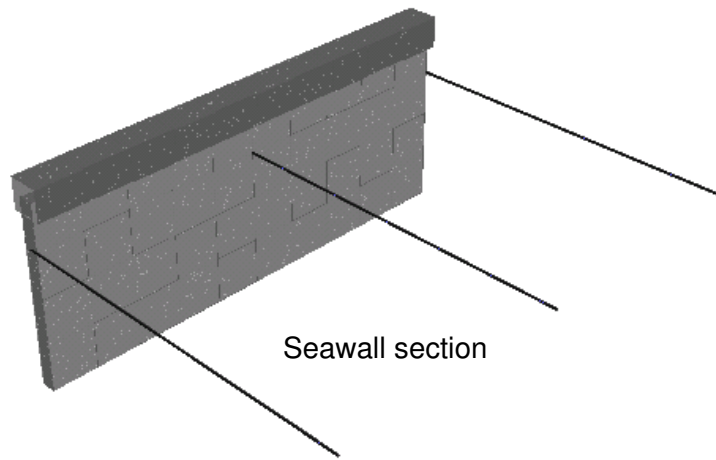
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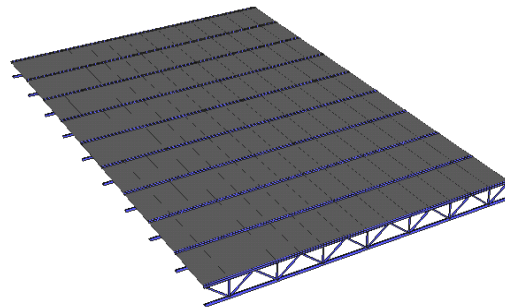


Entire seawall

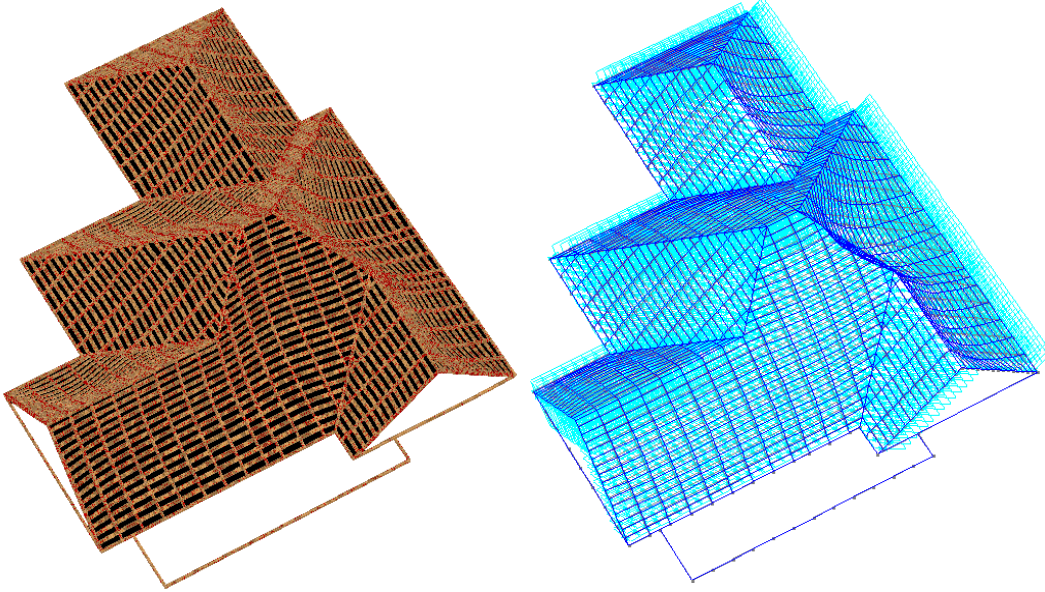
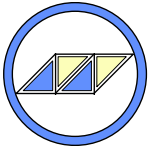


Seawall section

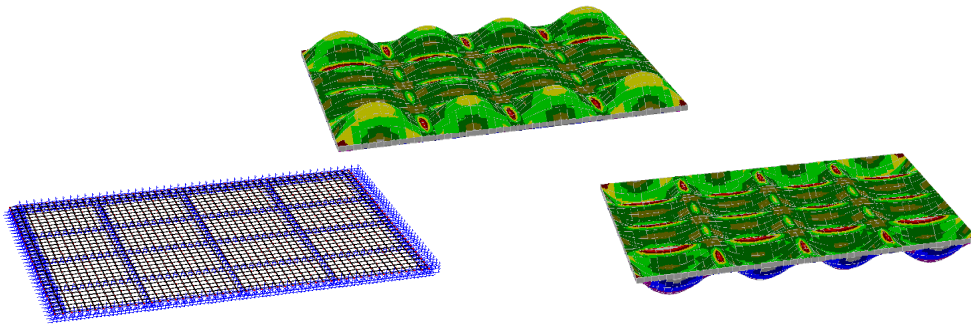
To analyze the structural behavior of seawall when loaded with soil pressure



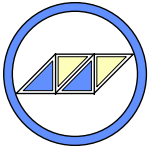
To determine the wind resistance of the car porch roof



To evaluate the structural capacity of the roof



To determine the capacity of the roof deck



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