Virtually every architecture and engineering firm uses 3D design software. At Kleinfelder, we leverage this technology to provide next-level 3D modeling and visualization that enhances many aspects of the design process. Our cutting-edge interactive tools streamline workflow, provide insight to project costs, deliver new ways of looking at complex designs, and find the right solutions to any project challenge.

**Services include:**
- Live 3D models
- Before and after renderings
- Illustrations
- Clash detection
- Photo realistic rendering
- Construction sequencing visualization
- Animations
- Shadow and lighting simulations

**Project types include:**
- Project sustainability assessments
- Climate change visualization
- Civil design
- Structural engineering
- Water resources
- Geotechnical
- Interior design
- Architecture
- Solid waste management

**3D SOLUTIONS FOR A WIDE RANGE OF PROJECTS**
We use 3D technology as a tool for visual clarity, understanding project scope, construction management, building information models, quality control, public relations, and design critique. Leveraging 3D software can help you build with sustainability in mind, visualize potential problems such as climate change, and provide foresight for future project expansions.

**EFFICIENCY IN WORKFLOW**
We are a flexible team of digital artists with backgrounds in architecture, engineering, and design computing. We understand our clients’ projects and tailor each project to its specific requirements.
3D Modeling and Visualization

3D RENDERING/3D MODELING
The process of converting a computer-based 3D wireframe model into 2D images and/or animations. Commonly used for creating detailed illustrations and massing models for initial and preliminary designs.

PHOTOREALISTIC RENDERING
The process of rendering images closely resemble a photograph—a convincing tool for showing a proposed design to stakeholders. Also helpful in making design decisions and moving the project forward.

PHOTO SIMULATIONS
A digital photorealistic illustration showing a proposed concept or new design elements added to a current context. A photo simulation is a rendering of a 3D model that can be overlaid into an existing photograph. Can help provide time-based (before and after) comparisons generated faster than photorealistic renderings referenced above.

LIVE OR INTERACTIVE MODELS
A 3D model that stakeholders can view from any angle in real time using a web browser and/or an open-source 3D-viewer. Can be used to review designs, convey project scope, and provide real-time answers during internal reviews or public meetings.