



Primary Use Cases for the SP3-RiskModel Analysis Levels:

- **Express:** Rapid assessments of one building or a portfolio of buildings
- **Standard:** Due-diligence risk assessment reports, preliminary resilient design decisions (previously called "SP3-RiskModel")
- **Advanced:** Detailed analysis of new/existing buildings with full control of all modeling parameters (replaces SP3-Design v.2.6)

	SP3-RiskModel Licensing Levels			Comparison to SP3-Design v2.6
	Express	Standard	Advanced	
Hazard				
Automated USGS soil type	✓	✓	✓	
Automated USGS hazard curves	✓	✓	✓	✓
User-defined soil types		✓	✓	✓
User-defined hazard curves			✓	✓
Building Damageable Components				
Autopopulation based on occupancy	✓	✓	✓	✓
Age-specific component capacity calculations (code)	✓	✓	✓	
Fragility capacity scaling		✓	✓	
Fragility repair cost scaling		✓	✓	
Modification of locations and quantities of components			✓	✓
Grouping of components by performance groups			✓	
Addition of new components from database			✓	✓
Structural Properties				
Age-specific base shear and stiffness defaulting (code)	✓	✓	✓	
Updated strength+stiffnesses to including gravity and non-structural	✓	✓	✓	
Automation of modal properties for first three modes	✓	✓	✓	
User override base shear and fundamental periods		✓	✓	✓
User-defined modal properties for first three modes**			✓	
Structural Responses				
SRPE* for most building types up to 40-stories (three-mode inelastic)	✓	✓	✓	
SRPE for Wood Light Frame up to 5-stories (with 1-2 stories podium)	✓	✓	✓	✓
SRPE for tilt-up bldg. (w/ age/site-specific anchorage and component	✓	✓	✓	
Automation for weak-story irregularity		✓	✓	
Automation for plan torsion irregularity		✓	✓	
User-input of modal properties for three modes			✓	
User-defined median responses			✓	
User-defined response-history analysis results			✓	✓
Global Building Consequences				
Automated FEMA P-154 collapse capacity calculation	✓	✓	✓	✓
Include/exclude residual drift effects		✓	✓	✓
User defined collapse capacity curve			✓	✓
Output Metrics				
Per-intensity repair cost (mean/median/fractiles)	✓	✓	✓	✓
Annualized repair cost		✓	✓	✓
FEMA P-58 standard serial/parallel repair time estimation		✓	✓	✓
REDi repair time estimation		✓	✓	✓
FEMA P-58 updated Functional Recovery Time estimation (once available)		✓	✓	
U.S. Resiliency Council ratings		✓	✓	✓
Advanced breakdowns of component damage and costs			✓	
Available PDF Reports				
Executive summary	✓	✓	✓	
Full detailed summary		✓	✓	
USRC rating summary		✓	✓	
Advanced breakdowns of component damage			✓	
Support				
On-boarding demo with engineer		✓	✓	✓

*SRPE: Structural Response Prediction Engine

**Supported by analysis system, still being added to user interface