UCLA PRITZKER HALL
SEISMIC RENOVATION

PROJECT SUMMARY
10 Stories above grade, 3 stories below
Built circa 1967 and designed by noted Los Angeles architect Paul Revere Williams
Significant UCLA campus landmark
Houses Psychiatry Department including laboratories with high vibration sensitivity
Non-ductile concrete construction
Component testing program implemented to prove out minimalist retrofit scheme with viscous dampers
Retrofit improved seismic performance from UC Seismic Performance Level SPL V to SPL III (6.5 at BSE-1N, CP at BSE-2N)

COMPONENT TESTING PROGRAM
Designed to fill the knowledge gap between conservative ACSE41 models and our intuition of actual ductility
Conducted at UCLA and led by Dr. John Wallace and Ellie Moore
2/3 Scale specimens were mocked up of:
- Bottom of the tower portion 1.5 stories
- 5 facade columns and one half of one interior framing bay
- Biaxial figure 8 displacement pattern with a gradual increase in amplitude

ADVANCED ANALYSIS
Refined backbone curves derived from experimental results
ASCE 41-13 nonlinear dynamic procedure
Perform3D analysis software
Site-specific seismic hazard analysis provided seven pairs of CMS matched ground motion records at four hazard levels
Retrofit calibrated to achieve LS performance objective at BSE-1N and CP performance objective at BSE-2N with minimal number of damping devices

CONSTRUCTION
6 Months lead time for viscous dampers meant early bid package for critical path delivery
Bespoke detailing and careful consideration by CO Architects as well as KPFF created excellent constructible drawing sets
Highly collaborative team lead to cost and schedule effective construction
Basement laboratories were occupied during construction, including vibration sensitive equipment

IMPACT
The Psychiatry Department is one of the largest undergraduate programs at UCLA and is a major campus hub
Paul Revere Williams is recognized as one of Los Angeles’s most influential historic architects, and his standing as an historic African American leader in design is nationally acknowledged, as such the architectural integrity of the building was paramount

SUSTAINABILITY
Reduced concrete needs in retrofit
Preserved and extended the life of a historic gem eliminating the need for building replacement