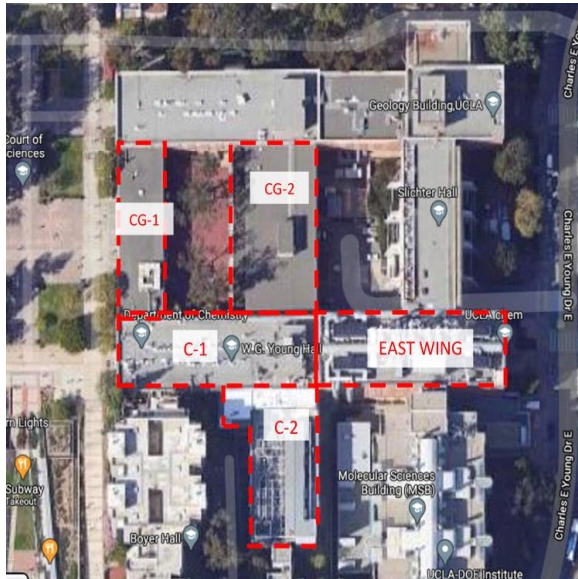




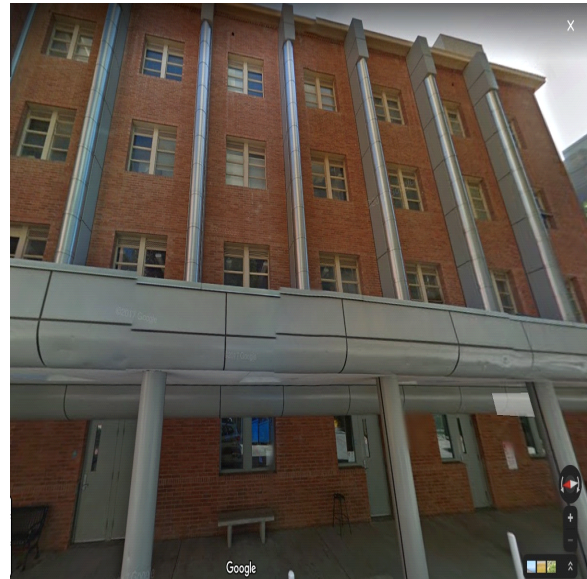
BUILDING REPORT REQUIREMENTS
ASCE 41-17 TIER 1 SEISMIC EVALUATIONS

BUILDING REPORT

- 1) UC Campus: Los Angeles
2) Building Name: Young Hall, Building C-2
3) Building CAAN ID: 4228B
4) Auxiliary Building ID: 4228B.3
5) Date of Evaluation: 12/4/2020
6) Evaluation by: Englekirk, TAS / NAT
7) Seismic Performance Rating and Basis of Rating: V, ASCE 41-17 Tier 1



8) Plan Image or Aerial Photo



9) Exterior Elevation Photo

- 10) Site Location
(a) Latitude Decimal Coordinates: 34.0688448
(b) Longitude Decimal Coordinates: -118.441199
11) ASCE 41-17 Model Building Type and Description
(a) Longitudinal Direction: C2 and C2a: Reinforced concrete shear walls
(b) Transverse Direction: C2 and C2a: Reinforced concrete shear walls
12) Number of Stories
(a) Above grade: 4
(b) Below grade: 0
13) Original Building Design Code & Year: UBC-1949
14) Retrofit Building Design Code & Year (if applicable): UCB-1988
15) Cost Range to Retrofit (if applicable): (Low, Medium, High or Very High): Medium



Comments: Young Hall consists of five separate buildings (see the plan view showing buildings CG-1, CG-1, C-1, C-2, and the East Wing). Separate reports have been prepared for each building.

Building C-2 was renovated in 1995, and the major renovations consisted of an added steel overhang roof at the 2nd (C) Floor as well as a rooftop steel support frame for MEP equipment; however, no seismic upgrades were done as part of the 1995 renovation. The lateral force resisting system of Building C-2 in



each orthogonal direction consists of 10"-12" thick perimeter reinforced concrete shear walls. Refer to the calculations for the typical floor plan view and wall elevation views. Structural deficiencies per the Tier 1 evaluation include overstressed shear walls mostly along the East-West direction, torsion issue along the East-West direction above the C Floor, as well as insufficient confinement of secondary components for deflection compatibility.

BACKGROUND INFORMATION

Site Information

16) Site Class (A – F) and Basis of Assessment

- (a) Site Class: **D**
- (b) Site Class Basis: **Unknown (Default)**
- (c) Site Class Company: **None**
- (d) Site Class Report Date: **None**
- (e) Site Class Ref Page No.: **None**

17) Geologic Hazards

- (a) Fault Rupture (Yes, No or Unknown) and Basis of Assessment: **No, CGS Maps**
- (b) Liquefaction (Yes, No or Unknown) and Basis of Assessment: **No, CGS Maps**
- (c) Landslide (Yes, No or Unknown) and Basis of Assessment: **No, CGS Maps**

18) Site-specific Ground Motion Study? (Yes or No) **No**

Seismic design acceleration parameters of interest:	
For BSE-1N	1.633 and 0.828
For BSE-1E	0.897 and 0.517

19) Estimated Fundamental Period (seconds)

- (a) Longitudinal: **0.365**
- (b) Transverse: **0.365**

20) Falling Hazards Assessment Summary: **There is a potential for spalling of the brick veneer.**

21) Structural Non-Compliances/Findings Significantly Affecting Rating Determination Summary
Significant Structural Deficiencies, Potentially Affecting *Seismic Performance Rating* Designation:

- (a) Lateral System Stress Check (wall shear, column shear or flexure, or brace axial as applicable):
Yes, wall shear stress deficiency noted
- (b) Load Path: **No deficiency noted**
- (c) Adjacent Buildings: **Yes, deficiency noted. The 5" gap provided between Building C-2 and Building C-1 to the north is less than the required separation of 8.64" per the Tier 1 checklist.**
- (d) Weak Story: **No deficiency noted**
- (e) Soft Story: **No deficiency noted**
- (f) Geometry (vertical irregularities): **No deficiency noted**
- (g) Torsion: **Yes, deficiency noted**
- (h) Mass – Vertical Irregularity: **No deficiency noted**



- (i) Cripple Walls: **Not Applicable**
- (j) Wood Sills (bolting): **Not Applicable**
- (k) Diaphragm Continuity: **No deficiency noted**
- (l) Openings at Shear Walls (concrete or masonry): **Yes, deficiency noted along the South Elevation Wall Pier adjacent to Stair #51.**
- (m) Liquefaction: **No**
- (n) Slope Failure: **No**
- (o) Surface Fault Rupture: **No**
- (p) Masonry or Concrete Wall Anchorage at Flexible Diaphragm: **Not Applicable**
- (q) URM wall height to thickness ratio: **Not Applicable**
- (r) URM Parapets or Cornices: **Not Applicable**
- (s) URM Chimney: **Not Applicable**
- (t) Heavy Partitions Braced by Ceilings: **No deficiency noted**
- (u) Appendages: **No deficiency noted**

22) Brief Description of Anticipated Failure Mechanism

Shear cracking and flexural compression failure of shear walls. Shear failure of lightly confined concrete gravity columns due to deformation compatibility drift.

23) Seismic Retrofit Concept Sketches/Description (only required for buildings rated V or worse)

Increase confinement of concrete columns via FRP overlay, added shear wall strength using thickened cross-section or FRP overlay, or energy dissipation to reduce drift.

Building Report Appendices

- A) ASCE 41-17 Tier 1 Checklists (Structural only)
- B) Quick Check Calculations