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UCLA – Clark Library CTR – Support Facility

DATE: 2/17/2021
ASCE 41-17 Tier 1 Seismic Evaluation
Minimum Building Report Information

BUILDING DATA

Campus: UCLA
Building Name: Clark Library CTR Support Facility
CAAN ID: 4452
Auxiliary Building ID:
Address: 2520 Cimarron St. Los Angeles, CA 90018
Site location coordinates: Latitude 34.03351687 Longitudinal -118.3154301

	
Aerial Photo	Exterior Elevation

ASCE 41-17 Model Building Type:

a. Longitudinal Direction: RM1: Reinforced Masonry
b. Transverse Direction: W1 and W2: Wood frame, wood shear panels

Site-specific Ground Motion Study? No
Seismic Design Acceleration Parameters of Interest:

a. For BSE-1E S_{XS}=0.878g and S_{X1}=0.501g
b. For BSE-2E S_{XS}=1.779g and S_{X1}=0.914g

Estimated Fundamental Period (seconds)

a. Longitudinal: 0.13s
b. Transverse: 0.13s

Gross Square Footage: 1,667
Number of stories *above* grade: 2
Number of basement stories *below* grade: 0

Year Original Building was Constructed: 1990
Original Building Design Code & Year: UBC-1988
Retrofit Building Design Code & Code (if applicable): N/A

SITE INFORMATION

Site Class: D Basis: Byer Geotechnical, Inc., May 8, 2014, Pg. 6
Geologic Hazards:
Fault Rupture: No Basis: Referenced Geotechnical Report
Liquefaction: No Basis: Referenced Geotechnical Report
Landslide: No Basis: Referenced Geotechnical Report

UCOP SEISMIC PERFORMANCE RATING (OR "RATING"): V

"BALLPARK" RETROFIT COST (if applicable)

- ☐ Minor (<$50/sf)
- ☒ Moderate (~$50-$200/sf)
- ☐ Major (>$200/sf)

SUMMARY TIER 1 SEISMIC EVALUATION STRUCTURAL NON-COMPLIANCES/FINDINGS SIGNIFICANTLY AFFECTING RATING DETERMINATION

Significant Structural Deficiencies, Potentially Affecting Seismic Performance Level Designation:

- ☒ Lateral System Stress Check (wall shear, column shear or flexure, or brace axial as applicable)
- ☐ Lateral System Detailing (reinforcement ratio, confinement, aspect ratio, etc)
- ☐ Load Path
- ☐ Adjacent Buildings
- ☐ Weak Story
- ☐ Soft Story
- ☐ Geometry (vertical irregularities)
- ☐ Torsion
- ☐ Mass – Vertical Irregularity
- ☐ Cripple Walls
- ☐ Wood Sills (bolting)
- ☐ Diaphragm Continuity
- ☐ Openings at Shear Walls (concrete or masonry)
- ☐ Liquefaction

☐ Slope Failure
☐ Surface Fault Rupture
☒ Masonry or Concrete Wall Anchorage at Diaphragm
☐ URM wall height to thickness ratio
☐ URM Parapets or Cornices
☐ URM Chimney
☐ Heavy Partitions Braced by Ceilings
☐ Appendages

POTENTIAL FALLING HAZARDS

- ☐ Heavy ceilings, features or ornamentation above large lecture halls, auditoriums, lobbies or other areas where large numbers of people congregate.
- ☐ Heavy masonry or stone veneer above exit ways.
- ☐ Unbraced masonry parapets, cornices or other ornamentation above exit ways.
- ☐ Unrestrained hazardous materials storage.
- ☐ Masonry chimneys.
- ☐ Unrestrained natural gas-fueled equipment such as water heaters, boilers, emergency generators, etc.
- ☒ None of the above.

Due to current COVID-19 protocols, we did not verify in field that as-built documentation match current conditions or perform any condition assessment of the existing structure to identify falling hazards as required by the UCOP SSP.

BRIEF DESCRIPTION OF ANTICIPATED FAILURE MECHANISM

Wood shear walls do not have adequate capacity in transverse direction. Anchorage of CMU wall to diaphragm does not have adequate capacity.

COMMENTS AND RECOMMENDATIONS

Because the wood shear walls do not have adequate capacity in transverse direction they would need to be upgraded to either moment frames or braced frames.

The anchorage of the CMU wall to the diaphragm needs to be retrofitted due to the inadequate capacity.