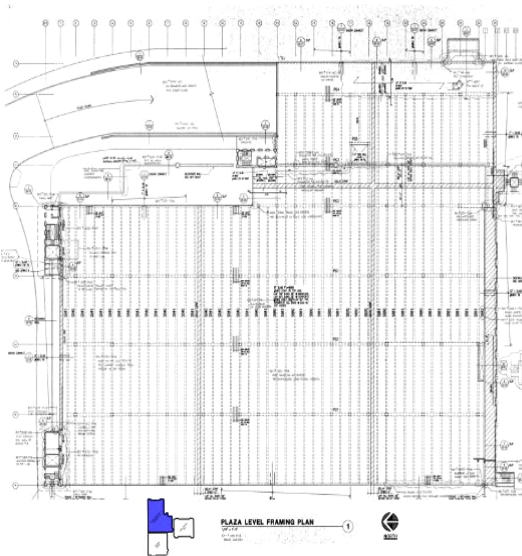




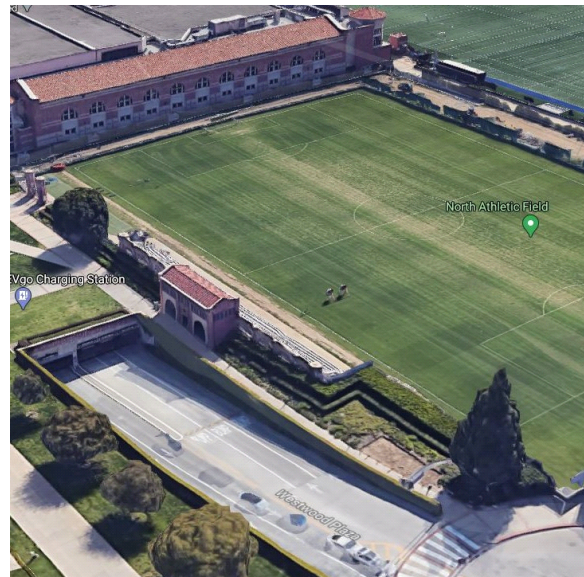
**BUILDING REPORT REQUIREMENTS
ASCE 41-17 TIER 1 SEISMIC EVALUATIONS**

BUILDING REPORT

- 1) UC Campus: [Los Angeles](#)
- 2) Building Name: [Parking Structure 4 \(PS4 Expansion\)](#)
- 3) Building CAAN ID:
- 4) Auxiliary Building ID: [4304.1](#)
- 5) Date of Evaluation: [11/13/2020](#)
- 6) Evaluation by: [Englekirk, AB](#)
- 7) Seismic Performance Rating and Basis of Rating: [IV, ASCE 41-17 Tier 1](#)



8) Plan Image or Aerial Photo



9) Exterior Elevation Photo

- 10) Site Location
 - (a) Latitude Decimal Coordinates: [34.0725052](#)
 - (b) Longitude Decimal Coordinates: [-118.4447524](#)
- 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: [1](#)
 - (b) Below grade: [1](#)
- 13) Original Building Design Code & Year: [CBC-1994](#)
- 14) Retrofit Building Design Code & Year (if applicable):
- 15) Cost Range to Retrofit (if applicable): (Low, Medium, High or Very High): [None](#)



Comments: [Parking Structure 4](#) is fully underground, however, because of adjacent basements and parking structures, plaza level is considered to be above seismic base and the system has been analyzed for 1 level of seismic story forces. Existence of unbalanced soil loading in the N-S building direction, but the current shear stress level on the retaining walls for a level IV rating are low enough so that this



additional loading could be accomodated. Plaza level deck shear connected along 1/3 of the total retaining wall length and slip joint provided along the remaining length. This is intended to allow the horizontal PT concrete deck and beams shrink inward towards the center.

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) **None**

Seismic design acceleration parameters of interest:	
For BSE-1N	1.629 and 0.826
For BSE-1E	0.897 and 0.517

19) Estimated Fundamental Period (seconds)

- (a) Longitudinal: **0.129**
- (b) Transverse: **0.129**

20) Falling Hazards Assessment Summary: **None noted.**

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):
No deficiency noted
- (b) Load Path: **No deficiency noted**
- (c) Adjacent Buildings: **No deficiency noted**
- (d) Weak Story: **No deficiency noted**
- (e) Soft Story: **No deficiency noted**
- (f) Geometry (vertical irregularities): **No deficiency noted**
- (g) Torsion: **No 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): No deficiency noted
- (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

Plaza level diaphragm shear transfer strength controls the capacity of the system. Diaphragm shear transfer strength insufficient and system is unable to transfer seismic forces into the lateral system.

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

None recommended.

Building Report Appendices

A) ASCE 41-17 Tier 1 Checklists (Structural only)

B) Quick Check Calculations