

Geotechnical Memorandum

June 8, 2020 File No.: LA-01670-01

Project No.: 303862-001

6436 Hollywood Blvd., LLC & 1624 Wilcox Ave., LP 40 West 57th Street, 15 FL New York, New York 10019

Attention: Mr. David Twerdun

Subject: Geotechnical Memorandum - Response to Comments by METRO

Proposed Mixed-Use Development 6430-6440 Hollywood Boulevard and

1624-1648 Wilcox Avenue Hollywood, California

Reference: Preliminary Geotechnical Engineering Report, Proposed Mixed-Use Development, 6430-

6440 Hollywood Boulevard and 1624-1648 Wilcox Avenue, Hollywood, California, by

Earth Systems, LA-01670-01, dated October 7, 2016.

Geology and Soils Report Approval Letter, by City of Los Angeles, Log Number 97576,

dated April 20, 2017.

"EIR Review Comments", by METRO, dated April 13, 2020.

Site Plan Review Submittal, by GMPA Architects, Dated September 12, 2019

#### **INTRODUCTION**

This Geotechnical Memorandum has been prepared for the site of a proposed mixed-used development. Geotechnical recommendations in support of the proposed development were provided in the above referenced report prepared by Earth Systems dated October 7, 2016. That report was reviewed and approved of the City of Los Angeles Department of Building and Safety (LADBS) in the above referenced letter dated April 20, 2017 (attached).

The purpose of this letter is to provide clarification of the proposed development and professional opinions on the development with respect to the METRO subway tunnel located under Hollywood Boulevard.

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### **SITE DESCRIPTION**

The approximate 1.42-acre site is at the southeast corner of Hollywood Boulevard and Wilcox Avenue in the Hollywood community of the City of Los Angeles, California. The project site is comprised of multiple parcels currently occupied by one- and two-story buildings and an asphalt covered parking lot (see Site Map, attached). Topographically, the property consists of relatively flat ground at an elevation of approximately 380 to 386 feet above mean sea level. Surface drainage is directed toward the southwest via sheet flow.

#### **PROJECT DESCRIPTION**

Based on plans by GMPA Architects and information provided by members of the design team, Earth Systems understands that the existing two-story structure located on the southeast corner of Hollywood Boulevard and Wilcox Avenue will be preserved and rehabilitated, while all other structures will be demolished. A 15-story building with two levels of subterranean parking is proposed for the lots fronting on Wilcox Avenue and a new single-story building is proposed on the second lot east of Wilcox Avenue, along Hollywood Boulevard.

Excavations for the subterranean parking garage are not expected to exceed 40 feet in depth below existing grade. Conventional shoring and excavation techniques will be used during the construction of the subterranean garage.

## **DISCUSSION AND CONCLUSIONS**

The concerns introduced by METRO that pertain to geotechnical include potential loading on the tunnel, interference with shoring and vibration due to construction activity. Earth Systems response below is our professional opinion based on experience with similar projects and the local earth materials. A detailed evaluation (e.g., finite element analyses and vibrations study) may be completed if requested.

The proposed development can be separated into three separate entities: 1) the 15-story high-rise over 2-floors of subterranean parking, to be located at 1624 – 1644 North Wilcox Avenue; 2) the one-story new construction at 6430 – 6434 Hollywood Boulevard; and 3) the rehabilitation of the existing two-story building at the southeast corner of Hollywood Boulevard and Wilcox Avenue (6436 Hollywood Boulevard).

The 15-story high-rise over 2-floors of subterranean parking will front on Wilcox Avenue and will be set back south of Hollywood Boulevard by at least 145 feet. That development will include excavations up to approximately 40 feet deep requiring the use of soldier pile shoring with tie-backs. Drilling of the soldier piles and tie backs will penetrate firm soil, no hard rock or indurated layers are anticipated; therefore, vibration will be minimal. The tieback should not exceed 30 to 50 feet, staying

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well away from Hollywood Boulevard. Given this development's separation from Hollywood Boulevard impact to the METRO subway is anticipated to be negligible.

The one-story portion of the development will consist of demolishing the existing one-story building that fronts on Hollywood Boulevard and replacing it with a new one-story building. The net change in loading is anticipated to be minimal as the development will be replacing like for like and therefore should have a negligible effect of the METRO tunnel.

The proposed remodel will provide no significant change to the underlying earth materials and therefore should have a negligible effect of the METRO tunnel.

Earth Systems strives to provide professional opinions, analyses and recommendations in accordance with the applicable standards of care for the geotechnical engineering profession at the time the study is conducted. Earth Systems appreciates this opportunity to provide professional geotechnical engineering services for this project. If you need clarification of the information contained in this report, or if Earth Systems can be of additional service, please contact the undersigned.

Respectfully submitted,

**Earth Systems** 

Christopher F. Allen, E.G.

**Project Engineering Geologist** 

**END OF TEXT** 

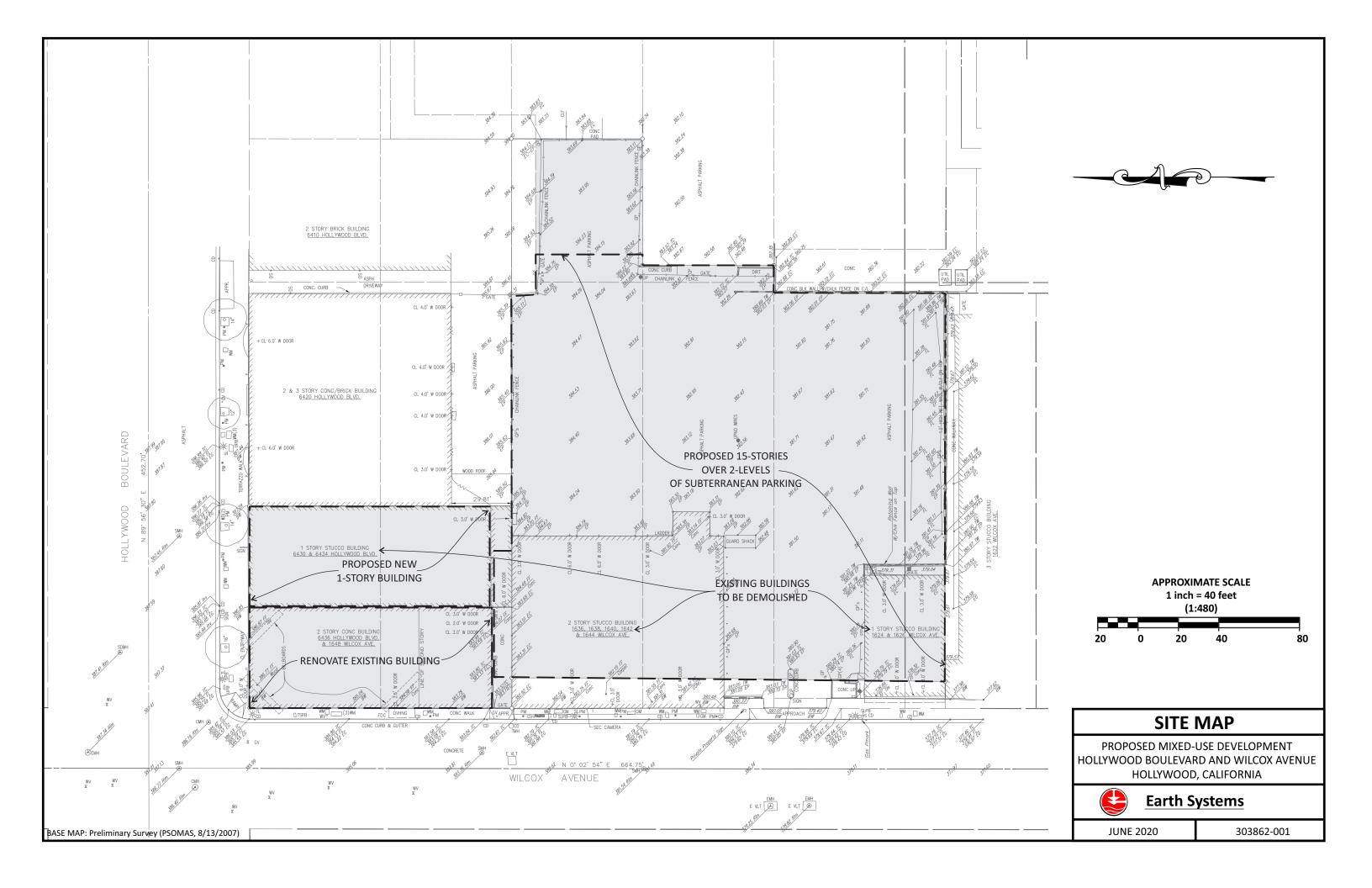
**ATTACHMENTS** 

Site Map

Geology and Soils Report Approval Letter (LADBS, April 20, 2017)

Distribution:

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## GEOLOGY AND SOILS REPORT APPROVAL LETTER

April 20, 2017

LOG # 97576 SOILS/GEOLOGY FILE - 2

6436 Hollywood Blvd., LLC 40 West 57th Street, 23 FL New York, New York 10019

TRACT:

HOLLYWOOD (MR 28-59/60)

BLOCK:

14

LOTS:

1 (Arbs. 2 & 3), 2 (Arbs. 2 & 3), FR 3, FR 4, FR 5 (Arb. 1), FR 6 (Arb. 1), FR 15 (Arb. 2),

FR 16 (Arb. 1)

LOCATION:

6430, 6432, 6434, 6438, 6440, & 6436 W. Hollywood Boulevard and 1624, 1626, 1628,

1634, 1638, 1640, 1642, 1644, 1646, & 1648 N. Wilcox Avenue

CURRENT REFERENCE	REPORT	DATE OF	
REPORT/LETTER(S)	<u>No.</u>	<b>DOCUMENT</b>	PREPARED BY
Geology/Soils Report	LA-01670-01	10/07/2016	Earth Systems
Infiltration Report	LA-01670-02	10/10/2016	Earth Systems

The Grading Division of the Department of Building and Safety has reviewed the referenced reports that provide recommendations for the proposed demolition of all site structures except a 2-story structure that will be preserved and renovated, a 1-story structure, and a 17-story (15-above, 2-below grade) mixed use building with retaining walls. The earth materials at the subsurface exploration locations consist of up to 5 feet of uncertified fill underlain by alluvium. The consultants recommend to support the proposed 1-story structure on conventional foundations bearing on a blanket of properly placed fill a minimum of 3 feet thick and the proposed 17-story tower on mat-type foundations bearing on native undisturbed soils.

The referenced reports are acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2017 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

1. Whenever the principal building on a site is added to, altered or repaired in excess of 50 percent of its replacement value, the entire site shall be brought up to the current Code standard. (7005.9).

If this condition applies, a supplemental report identifying all non-conforming conditions shall be provided with recommendations to bring the entire site into conformance with the current Code standard. This shall include but not to be limited to regrading and/or retaining of steep slopes and underpinning/replacement of all existing foundations where not in conformance with current Code standards.

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- 2. The geologist and soils engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans that clearly indicates the geologist and soils engineer have reviewed the plans prepared by the design engineer; and, that the plans include the recommendations contained in their reports (7006.1).
- 3. An on-site storm water infiltration system at the subject site shall not be implemented, as recommended.
- 4. All recommendations of the reports that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
- 5. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.
- 6. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).
- 7. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.
- 8. If import soils are used, no footings shall be poured until the soils engineer has submitted a compaction report containing in-place shear test data and settlement data to the Grading Division of the Department; and, obtained approval (7008.2).
- 9. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
- 10. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
- 11. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).
- 12. Temporary excavations that remove lateral support to the public way, adjacent property, or adjacent structures shall be supported by shoring, as recommended. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)
- 13. Prior to the issuance of any permit that authorizes an excavation where the excavation is to be of a greater depth than are the walls or foundation of any adjoining building or structure and located closer to the property line than the depth of the excavation, the owner of the subject site shall provide the Department with evidence that the adjacent property owner has been given a 30-day written notice of such intent to make an excavation (3307.1).
- 14. The soils engineer shall review and approve the shoring and/or underpinning plans prior to issuance of the permit (3307.3.2).

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- 15. Prior to the issuance of the permits, the soils engineer and/or the structural designer shall evaluate the surcharge loads used in the report calculations for the design of the retaining walls and shoring. If the surcharge loads used in the calculations do not conform to the actual surcharge loads, the soil engineer shall submit a supplementary report with revised recommendations to the Department for approval.
- 16. Unsurcharged temporary excavation may be cut vertical up to 5 feet. For excavations over 5 feet, the lower 5 feet may be cut vertically and the portion of the excavation above 5 feet shall be trimmed back at a gradient not exceeding 1.5H:1V, as recommended.
- 17. Shoring shall be designed for the lateral earth pressures specified in the section titled "C. Temporary Shoring" starting on page 16 of the 10/07/2016 report; all surcharge loads shall be included into the design.
- 18. Shoring shall be designed for a maximum lateral deflection of 1 inch, provided there are no structures within a 1:1 plane projected up from the base of the excavation. Where a structure is within a 1:1 plane projected up from the base of the excavation, shoring shall be designed for a maximum lateral deflection of ½ inch, or to a lower deflection determined by the consultant that does not present any potential hazard to the adjacent structure.
- 19. A shoring monitoring program shall be implemented to the satisfaction of the soils engineer.
- 20. All foundations shall derive entire support from native undisturbed soils or a blanket of properly placed fill a minimum of 3 feet thick, as recommended and approved by the soils engineer by inspection.
- 21. The structural designer and soils engineer shall verify and attest to the adequacy of the existing footings for underpinning by signature and license stamp, on the final plans.
- 22. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), ½-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.
- 23. Slabs placed on approved compacted fill shall be at least 3½ inches thick and shall be reinforced with ½-inch diameter (#4) reinforcing bars spaced a maximum of 16 inches on center each way.
- 24. The seismic design shall be based on a Site Class D, as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.
- 25. Retaining walls shall be designed for the lateral earth pressures specified in the section titled "G.1 Retaining Walls" starting on page 24 of the 10/07/2016 report. All surcharge loads shall be included into the design.
- 26. Retaining walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified on section titled "G.2 Retaining Walls" of the 10/07/2017 report (1803.5.12).
- 27. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).
- 28. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soils report shall

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be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).

- 29. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).
- 30. Basement walls and floors shall be waterproofed/damp-proofed with an LA City approved "Below-grade" waterproofing/damp-proofing material with a research report number (104.2.6).
- 31. Prefabricated drainage composites (Miradrain, Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.
- 32. The structure shall be connected to the public sewer system per P/BC 2014-027.
- 33. All roof, pad and deck drainage shall be conducted to the street in an acceptable manner; water shall not be dispersed on to descending slopes without specific approval from the Grading Division and the consulting geologist and soils engineer (7013.10).
- 34. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
- 35. Any recommendations prepared by the geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Grading Division of the Department for approval prior to use in the field (7008.2, 7008.3).
- 36. The geologist and soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008 & 1705.6).
- 37. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)
- 38. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction; shoring; underpinning; protection fences; and, dust and traffic control will be scheduled (108.9.1).
- 39. Installation of shoring, underpinning, slot cutting excavations and/or pile installation shall be performed under the inspection and approval of the soils engineer and deputy grading inspector (1705.6).
- 40. The installation and testing of tie-back anchors shall comply with the recommendations included in the report or the standard sheets titled "Requirement for Tie-back Earth Anchors", whichever is more restrictive. Research Report #23835
- 41. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction

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report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).

42. No footing/slab shall be poured until the compaction report is submitted and approved by the

Grading Division of the Department.

CASEY LEE JENSEN

Engineering Geologist Associate II

DAN RYAN EVANGELISTA Structural Engineering Associate I

CLJ/DRE:clj/dre Log No. 97576 213-482-0480

cc: Earth Systems, Project Consultant

LA District Office