ALTA CALIFORNIA
GEOTECHNICAL INC.

170 North Maple Street, Suite 108
Corona, CA 92880
www.altageotechnical.com

FOULGER-PRATT
136 Calle de Los Molinos
San Clemente, CA 92672

February 24, 2023
Project No. 1-0312

Attention: Mr. Jim Ivory

Subject: **UPDATED GEOTECHNICAL REPORT**
5261 Arlington Avenue
City of Riverside, California

References:
1.) Alta California Geotechnical, Inc., 2020, Geotechnical Investigation, 5261 Arlington Avenue, City of Riverside, California, dated February 24, 2020 (Project Number 1-0312).
2.) City of Riverside, 2020, Standard Plans for Public Works Construction, Public Works Department, Engineering Division, City of Riverside, California; https://www.riversideca.gov/publicworks/drawings.asp

Dear Mr. Ivory:

Presented herein is Alta California Geotechnical, Inc.'s (Alta) Updated Geotechnical Report for the proposed development at 5261 Arlington Avenue, in the City of Riverside, California. This report is based on a review of the site plan provided to Alta and the recommendations presented in Alta's previous report. Alta had previously prepared a geotechnical investigation report (Reference 1) for the subject site.

Alta has reviewed the latest site plan for the project provided by Architects Orange with respect to the geotechnical recommendations presented in the referenced reports. The site plan was found to be feasible with respect to the geotechnical recommendations for the project.

Included in this report is an updated geotechnical map utilizing the engineering site plan as a base. The recommendations presented in the Alta's previous report (Reference 1) with respect to general grading recommendations and improvement design remain applicable to the proposed development unless superseded herein. Updated remedial grading specific to the proposed development shown on the site plan are presented herein.

1.0 UPDATED GEOTECHNICAL MAP

An updated geotechnical map utilizing the site plan as a base is enclosed as Plate 1. The map depicts the geologic units, locations of previous exploratory excavations, and proposed remedial grading. Logs of previous exploratory excavations are presented in Alta's Geotechnical Investigation (Reference 1).

2.0 UPDATED PROPOSED DEVELOPMENT

Based on our review of the Site Plan, the existing structures and parking lot will be demolished, and 27 multi-story residential structures, 2 retail structures, one pool, one club house and associated improvements will be developed. Alta anticipates that remedial grading will be required to develop the site to support the proposed structures with shallow foundations and reinforced concrete slabs-on-grade. Significant height slopes are not anticipated for the project.

3.0 UPDATED REMEDIAL GRADING RECOMMENDATIONS

Remedial grading recommendations were previously presented in Reference 1 and are shown on the enclosed Plate 1. Presented below is a summary of the recommendations specific to the engineering site plan.

3.1 Site Preparation/Unsuitable Soil Removals

All grading shall be accomplished under the observation and testing of the project geotechnical consultant in accordance with the recommendations contained herein and the City of Riverside criteria.

3.1.1 Site Preparation

Vegetation, construction debris, and other deleterious materials are unsuitable as structural fill material and should be disposed of off-site prior to commencing grading/construction. Any septic tanks, seepage pits or wells should be abandoned as per the County of Riverside Department of Health Services.

Existing concrete should be removed prior to the placement of engineered fill. The demolished concrete may be incorporated into compacted, engineered fills after it is crushed to a maximum size of six (6) inches. Prior to placement as engineered fill any protruding steel rebar should be cut from the concrete pieces and disposed of offsite.

Existing asphaltic concrete should be removed prior to the placement of engineered fill. From a geotechnical perspective, this material may be incorporated into compacted, engineered fills after it is crushed to a maximum size of six (6) inches. The crushed asphalt should not be placed under residential structures, but rather, it can be placed in approved non-residential areas, such as streets, parking areas or open space. These recommendations should be verified by the environmental consultant.

3.1.2 Unsuitable Soil Removals

The undocumented artificial fill and the uppermost portions of the young and old alluvial fan deposits onsite are compressible and as such, are not suitable to support the proposed structures. Accordingly, it is recommended to completely remove the undocumented artificial fills and the highly weathered portions of the underlying young and old alluvial deposits across the site and as close to the property boundaries as possible.

It is anticipated that the upper five (5) to seven (7) feet of existing soils will require removal and recompaction, extending a minimum of five (5) feet horizontally outside the proposed building envelopes. Removal bottoms should be observed by the Project Geotechnical Consultant to make a final determination that suitable (non-weathered, limited porosity) soils have been exposed. Removal bottoms should be tested to

determine that the exposed soils have a minimum relative compaction of 85% of the laboratory maximum density (per ASTM test method D-1557). Both observations and tests must be accomplished to determine that suitable bottoms have been exposed. As noted in Alta's report (Alta, 2020), if unsuitable soils are exposed upon the completion of the removal, additional removals may be required.

Footings for structures should be underlain by a minimum of two (2) feet of compacted fill. As such, for building pads where unsuitable soil removals do not provide the minimum depth of compacted fill, or where design grades and/or remedial grading activities create cut/fill transitions, the cut and shallow fill portions of the building pads should be over-excavated during grading and replaced with compacted fill. Based on the proposed design, the recommended unsuitable soil removals shall provide the minimum section of engineered fill.

For fill areas in streets, in general, a minimum removal and recompaction of two (2) feet is recommended, however all undocumented artificial fill shall be removed and recompacted, which may require deeper removals. For cuts deeper than the two (2) feet in street areas, removals are not required provided all the undocumented artificial fill is removed. Cuts less than the thickness of the undocumented fill should extend down to the fan deposits.

Material removed as part of the unsuitable soil removals can be used as artificial fill, provided it is free of deleterious materials.

4.0 UPDATED FOUNDATION DESIGN RECOMMENDATIONS

The foundation design recommendations presented in the Alta's previous report (Reference 1) were originally prepared under the 2019 CBC. Based on a review of the referenced report, the slab, foundation and improvement design recommendations presented in the referenced report remain applicable under the 2022 CBC.

5.0 OFFSITE UTILITIES

It is our understanding that offsite utility construction shall be accomplished as part of the project. Per the Aerial Site Boundary and Off-site detail provided by Albert A. Webb Associates (Plate 2), the installation of offsite utilities will extend along the existing Streeter Avenue, Central Avenue and Hillside Avenue. Trench backfill shall be accomplished per the City of Riverside Trench Backfill Standard Drawing No. 453 (Reference 2 or current standards) and the general trench backfill recommendations presented in the Reference 1 report. The ultimate pavement repair for public streets is under the City of Riverside's purview and should be verified by the city prior to construction.

6.0 LIMITATIONS

The conclusions and recommendations in this report are based on the information generated during the previous investigation, review of the referenced reports, and our review of the site plan. The materials immediately adjacent to or beneath those observed may have different characteristics than those observed, and no representations are made as to the quality or extent of material not observed.

If you have any questions or should you require any additional information, please contact the undersigned at (951) 509-7090. Alta appreciates the opportunity to provide geotechnical consulting services for your project.

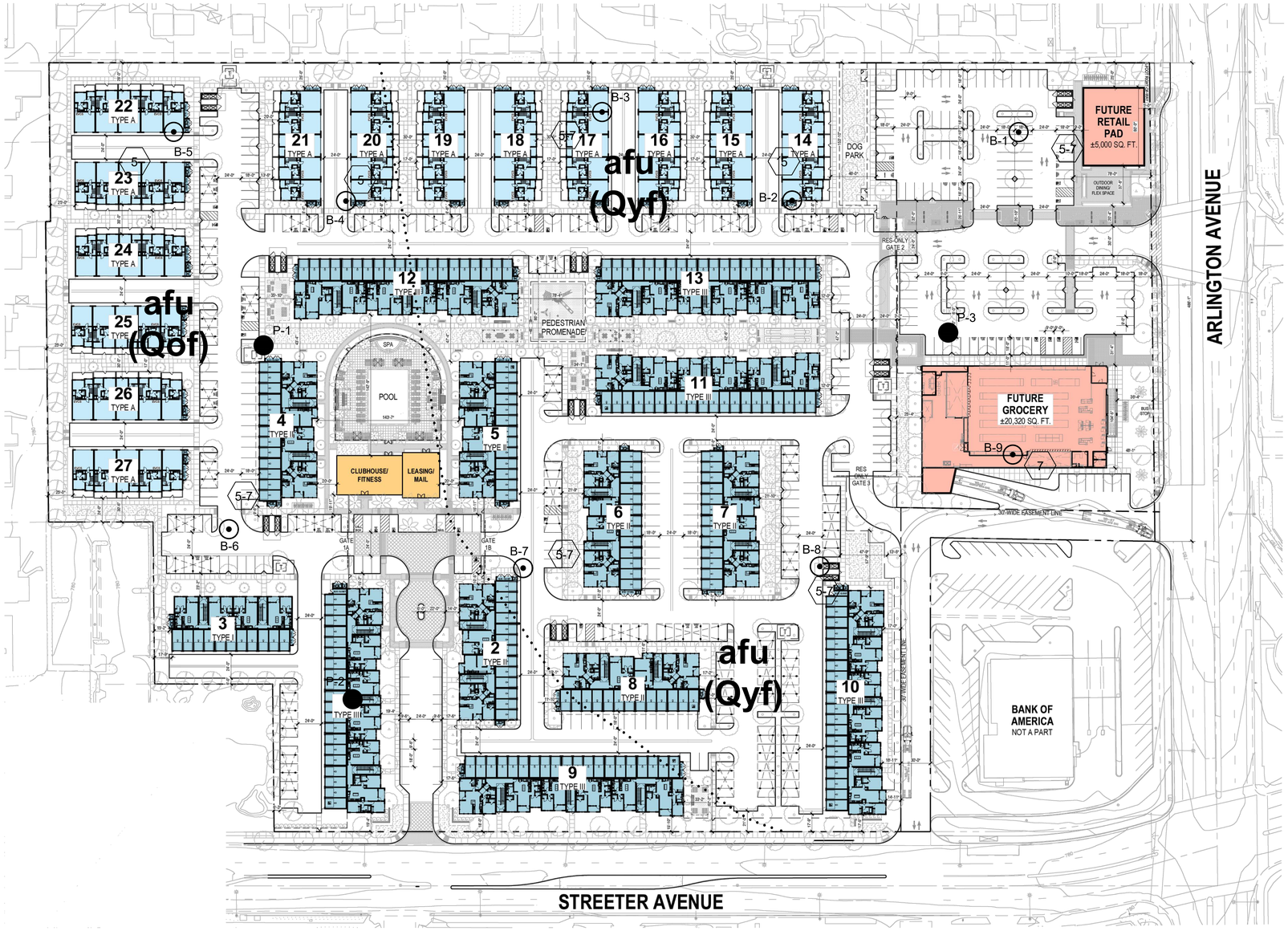
Sincerely,
Alta California Geotechnical, Inc.

JAMES B. COYNE
Staff Geologist
Project Manager

SCOTT A. GRAY/RGE 2857
Reg. Exp.: 12-31-24
Registered Geotechnical Engineer
President

Distribution: (3) Addressee

SAG: 1-0312 February 24, 2023 (Updated Geo Report, 5261 Arlington Ave.)



LEGEND

- RESIDENTIAL: 2-STORY TOWNHOMES
- RESIDENTIAL: 3-STORY TUCK-UNDER
- RESIDENTIAL: LEASING/AMENITY
- COMMERCIAL

Legend

afu	ARTIFICIAL FILL-UNDOCUMENTED
Qyf	YOUNG ALLUVIAL FAN DEPOSITS (BRACKETED WHERE BURIED)
Qof	OLD ALLUVIAL FAN DEPOSITS (BRACKETED WHERE BURIED)
B-1 ⊙	APPROXIMATE LOCATION OF BORING
P-1 ●	APPROXIMATE LOCATION OF INFILTRATION TEST
. . . . .	APPROXIMATE LOCATION OF BURIED GEOLOGIC CONTACT
5-7 ⬡	ANTICIPATED REMOVAL DEPTH IN FEET

PLATE 1

ALTA CALIFORNIA GEOTECHNICAL, INC.
170 N. MAPLE STREET, STE 108, CORONA, CA 92880
TELEPHONE: (951) 509-7090
PROJECT NUMBER: 1-0312 DATE: Feb. 22, 2023

NORTH

1"=50'-0" 0 25' 50' 100' 150'

SITE PLAN

A1.2

ARLINGTON MIXED USE

RIVERSIDE, CA

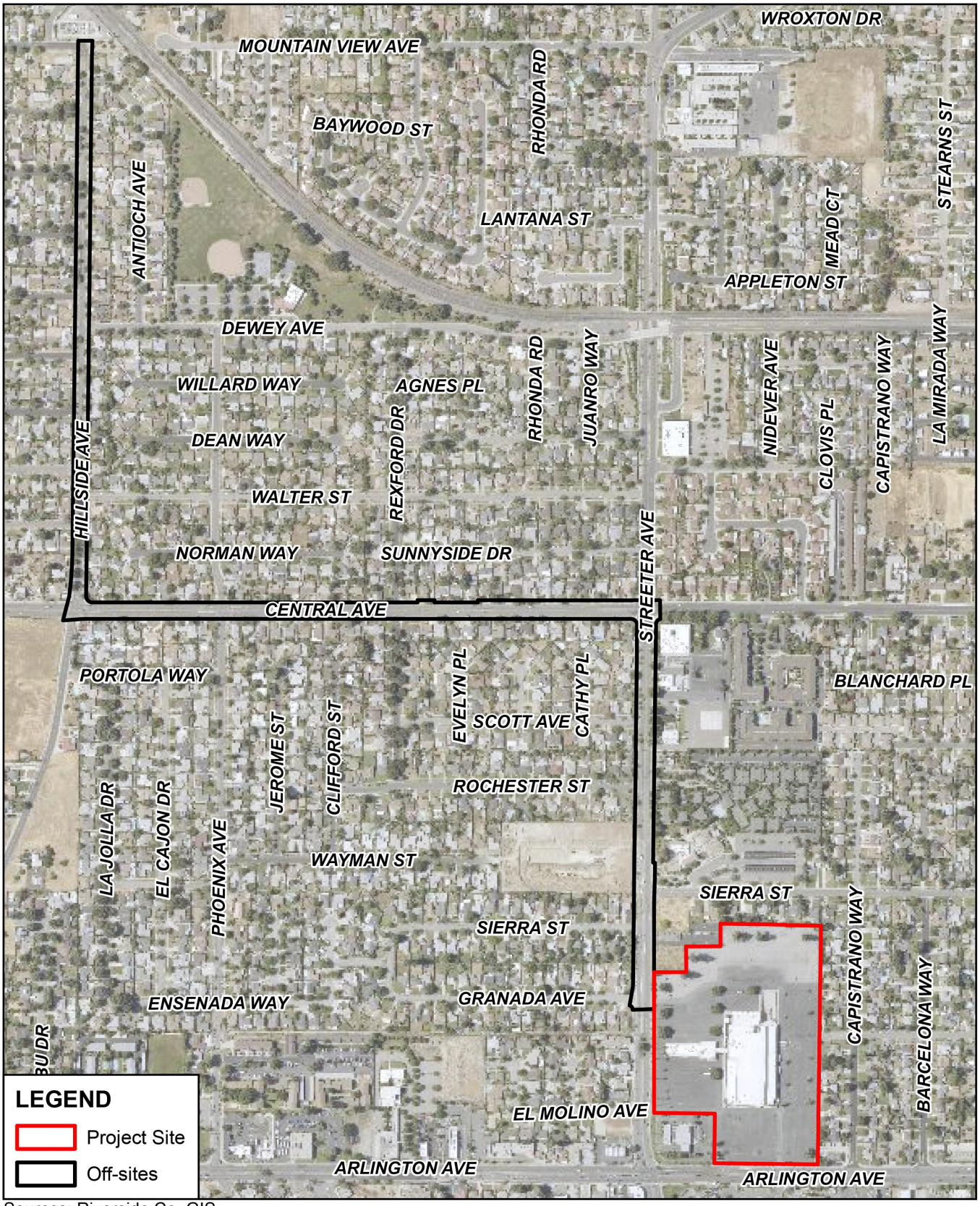
FOULGER-PRATT

SERITAGE GROWTH PROPERTIES

DATE: 08-05-2022
JOB NO.: 2020-055

ARCHITECTS ORANGE
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860

Architecture. Design. Relationships.



H:\2022\22-0172\GIS\PRO\aerial_site_and_offsites.aprx; Map created 31 Jan 2023

Sources: Riverside Co. GIS, 2020 (streets) and 2020 (imagery).

0 500 1,000 1,500 Feet

Aerial Site Boundary and Off-sites

Arlington Mixed Use Project

ALBERT A. WEBB ASSOCIATES

PLATE 2

ALTA CALIFORNIA GEOTECHNICAL, INC.
170 N. MAPLE STREET, STE 108, CORONA, CA 92880
TELEPHONE: (951) 509-7090

PROJECT NUMBER: 1-0312 DATE: Feb. 22, 2023