

APPENDIX E1

Geologic and Soils Engineering Plan Review and Update Report

November 19, 2019
IC 14073-I



Ginkgo Stonehouse LLC
805 W. Duarte Road, No. 101
Arcadia, California 91007

Subject

Geologic and Soils Engineering Plan Review and Update Report
Proposed 9 Lot Subdivision
Vesting Tentative Tract No. 65348
1935 Stonehouse Road/935 E Grandview Avenue
Sierra Madre, California

References Reports by Irvine Geotechnical, Inc.:

Geologic and Soils Engineering Exploration, Proposed Hillside Residential Subdivision, Tentative Tract 65348, Portions of Lots 33, 34 & 35 Camillo Guercio Tract, & Portion of T1N; R11W, 1935 Stone House Road/935 E. Grandview Avenue, Sierra Madre, California, dated December 29, 2005 and

Geologic and Soils Engineering Exploration Update, Proposed 13 Lot Subdivision, Vesting Tentative Tract No. 65348, 1935 Stonehouse Road/935 E Grandview Avenue, Sierra Madre, California, dated December 15, 2014

Report by Wilson Geosciences:

Seismic Refraction Investigation Northwest of the Intersection of Grandview and Stonehouse, Sierra Madre, California, dated September, 2005 and Revised January 2006

November 19, 2019
IC 14073-I
Page 2

Dear Gentle Persons;

Irvine Geotechnical has prepared this plan review report to update the geotechnical recommendations for the design and completion of the proposed project. This update report follows consultation with the civil engineer and review of the latest grading plan for Tentative Tract 65348.

The project scope has been reduced from what was previously studied and presented in the referenced reports. It is proposed to subdivide the property to create 9 lots. A building pad suitable for development with a single-family residence will be created on each lot. All of the lots will be accessed from Grand View Avenue via a new street (Street "A"). Two to 15-foot retaining walls are proposed along the uphill sides of the split level pads on Lot 6. Debris basins are not planned for this project. The proposed project is shown on the updated Geologic Map and Sections A through C.

The proposed lots and building pads are remote to significant slopes and the proposed grading and development will not reduce site stability. The findings of the previous reports that the bedrock and native alluvial deposits are stable and capable of supporting engineered grading and structures remain valid and applicable. The proposed graded slopes will be less than 10 feet high and 2:1 in gradient. The proposed building sites are not subject to geologic hazards posed from surface fault rupture, liquefaction, lateral spreading, seismic ground failure, landsliding, settlement, lurching, mudflows, or expansive soils.

The recommended bearing material for all the residential structures on the proposed pads is compacted fill. The pads and building sites should be prepared and graded in conformance with the SITE PREPARATION section of the previous report. Recommendations for design of foundations, slabs, pavements, retaining walls, and drainage control remain valid and applicable.

Building Code Seismic Coefficients

Seismic design parameters within the Building Code include amplification of the seismic forces on the structure depending on the soil type, distance to seismic source and intensity of shaking. The purpose of the code seismic design parameters is to prevent collapse of structures and loss of life during strong ground shaking. Cosmetic damage should be expected.

The following table lists the applicable seismic coefficients for the 2016 California Building Code.

SEISMIC COEFFICIENTS (2016 California Building Code)		
Latitude = 34.1677°N Longitude = 118.0362°W	Short Period (0.2s)	One-Second Period
Earth Materials and Site Class Chapter 20 - ASCE 7	Alluvium - D	
Seismic Design Category from Table 1613.3.5(1) and 1613.3.5(2)	E	
Spectral Accelerations from Figures 1613.3 (1) through 1613.3(6)	$S_s = 2.752$ (g)	$S_1 = 1.029$ (g)
Site Coefficients from Tables 1613.3.3 (1) and 1613.3.3 (2)	$F_A = 1.0$	$F_V = 1.5$
Spectral Response Accelerations from Equations 16-37 and 16-38	$S_{MS} = 2.752$ (g)	$S_{M1} = 1.544$ (g)
Design Accelerations from Equations 16-39 and 16-40	$S_{DS} = 1.835$ (g)	$S_{D1} = 1.029$ (g)

Spectral accelerations and peak ground accelerations at the site were determined for the Risk-Targeted Maximum Considered Earthquake (MCE_R) and Geometric Mean Peak Ground Acceleration (MCE_G) following the procedures in ASCE 7-10 and the 2017 Building Code. The computed PGA_M for this site is 1.057g.

SITE OBSERVATIONS DURING CONSTRUCTION

Please advise Irvine Geotechnical at least 24 hours prior to any required site visit. The agency approved plans and permits should be at the jobsite and available to our representative. The project consultant will perform the observation and post a notice at the jobsite of his visit and findings. This notice should be given to the agency inspector.

During construction, a number of reviews by this office are recommended to verify site geotechnical conditions and conformance with the intent of the recommendations for construction. Although not all possible geotechnical observation and testing services are required by the reviewing agency, the more site reviews requested, the lower the risk of future problems. It is recommended that all grading, foundation, and drainage excavations be seen by a representative of the geotechnical engineer PRIOR to placing fill, forms, pipe,

concrete, or steel. Any fill which is placed should be approved, tested, and verified if used for engineering purposes. Temporary excavations should be observed by a representative of the Geotechnical Engineer.

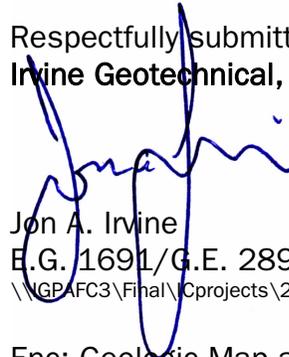
The following site reviews are advised or required. Should the observations reveal any unforeseen hazards, the geologist/engineer will recommend treatment.

Pre-construction meeting	Advised
Temporary excavations	Required
Bottom excavation for removals	Required
Keyway excavations and benching	Required
Subdrains	Required
Compaction of fill	Required
Foundation excavations	Required
Slab subgrade moisture barrier membrane	Advised
Slab subgrade rock placement	Advised
Slab steel placement	Advised
Subdrain and rock placement behind retaining walls	Required
Compaction of retaining wall backfill	Required
Compaction of utility trench backfill	Advised

Irvine Geotechnical requires at least a 24 hour notice prior to any required site visits. The approved plans and building/grading permits should be on the job and available to the project consultant.

Irvine Geotechnical appreciates the opportunity to provide our service on this project. Any questions concerning the data or interpretation of this or the referenced report should be directed to the undersigned.

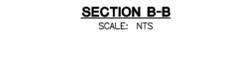
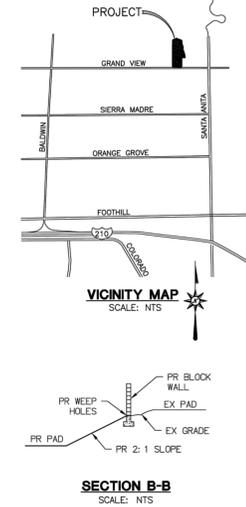
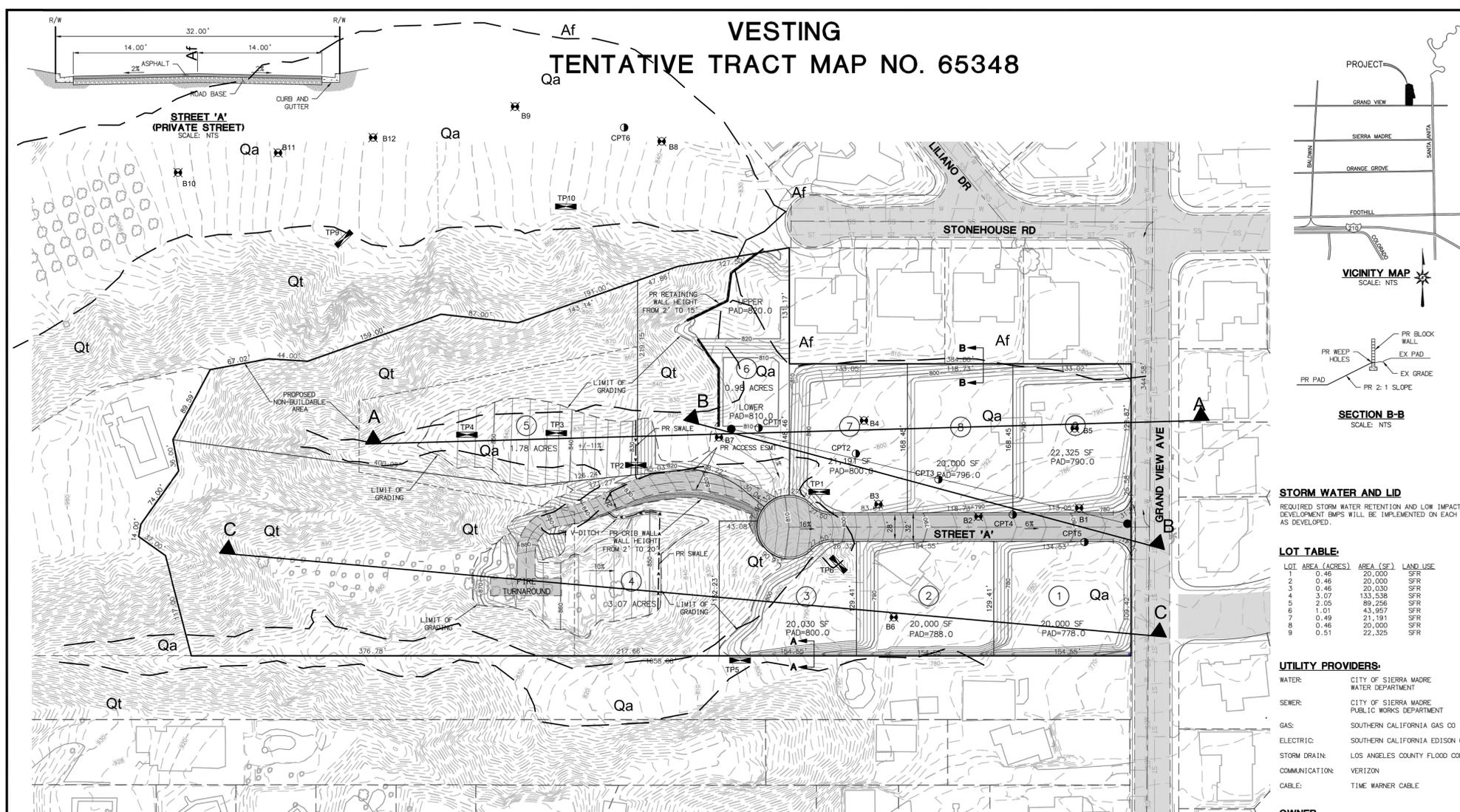
Respectfully submitted,
Irvine Geotechnical, Inc.


Jon A. Irvine
E.G. 1691/G.E. 2891



\\GPAFC3\Final\Cprojects\2014 Projects\IC14073 Ginkgo Stonehouse\IC14073 Ginkgo Stonehouse Update Report.wpd

Enc: Geologic Map and Sections A through C



STORM WATER AND LID
 REQUIRED STORM WATER RETENTION AND LOW IMPACT DEVELOPMENT BMPs WILL BE IMPLEMENTED ON EACH LOT AS DEVELOPED.

LOT TABLE:

LOT	AREA (ACRES)	AREA (SQ FT)	LAND USE
1	0.46	20,000	SFR
2	0.46	20,000	SFR
3	0.46	20,030	SFR
4	3.07	133,538	SFR
5	2.05	89,256	SFR
6	0.01	43,367	SFR
7	0.49	21,191	SFR
8	0.46	20,000	SFR
	0.51	22,325	SFR

UTILITY PROVIDERS:

WATER: CITY OF SIERRA MADRE WATER DEPARTMENT
 SEWER: CITY OF SIERRA MADRE PUBLIC WORKS DEPARTMENT
 GAS: SOUTHERN CALIFORNIA GAS CO
 ELECTRIC: SOUTHERN CALIFORNIA EDISON CO
 STORM DRAIN: LOS ANGELES COUNTY FLOOD CONTROL
 COMMUNICATION: VERIZON
 CABLE: TIME WARNER CABLE

OWNER:
 GINKGO STONEHOUSE, LLC
 805 WEST QUARTE ROAD NO. 101
 ARCADIA, CA 91007
 CONTACT: HOMER YEN
 PHONE: (626)374-3000

APPLICANT:
 GINKGO STONEHOUSE, LLC
 805 WEST QUARTE ROAD NO. 101
 ARCADIA, CA 91007
 CONTACT: HOMER YEN
 PHONE: (626)374-3000

ENGINEER:
 ADVANCED CIVIL GROUP, INC
 30251 GOLDEN LANTERN SUITE E, PMB 251
 LAGUNA NIGUEL, CA 92677
 CONTACT: R. STEVEN AUSTIN, PE
 PHONE: (949)391-7772

LEGEND

- TP1 [Symbol] LOCATION & NUMBER OF BACKHOE TEST PIT
- B3 [Symbol] LOCATION & NUMBER OF HOLLOW-STEM AUGER BORING
- CPT2 [Symbol] LOCATION & NUMBER OF CPT SOUNDING
- [Symbol] LOCATION OF SEISMIC REFRACTION LINE
- - - - - GEOLOGIC CONTACT
- [Symbol] GRANITE BEDROCK (QUARTZ DIORITE)
- [Symbol] ALLUVIAL TERRACE
- [Symbol] ALLUVIUM
- [Symbol] ARTIFICIAL FILL

NO.	DESCRIPTIONS	DATE	BY

SCALE VERIFICATION
 BAR IS ONE INCH ON ORIGINAL DRAWING
 IF NOT ONE INCH ON THIS SHEET
 AUGUST 2017 SCALES ACCORDANT

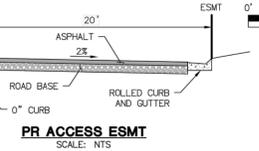
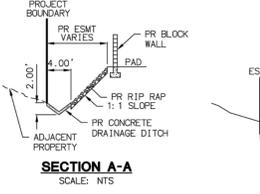
ADVANCED CIVIL GROUP
 30251 GOLDEN LANTERN SUITE E, PMB 251
 LAGUNA NIGUEL, CA 92677
 (949) 391-7772
 WWW.ADVANCEDCIVILGROUP.COM

STONEHOUSE PROPERTY
 GINKGO STONEHOUSE, LLC

JOB NUMBER: 100101
 DATE: 5/26/2017
 SCALE: 1" = 50'
 SHEET NO: 1 OF 1

LEGEND

- [Symbol] PROJECT BOUNDARY
- [Symbol] PROPOSED LOT LINE
- [Symbol] EXISTING LOT LINE
- [Symbol] PROPOSED SWALE
- [Symbol] PROPOSED MAJOR CONTOUR
- [Symbol] PROPOSED INTERVAL CONTOUR
- [Symbol] EXISTING MAJOR CONTOUR
- [Symbol] EXISTING INTERVAL CONTOUR
- [Symbol] PROPOSED RETAINING WALL
- [Symbol] EXISTING SANITARY SEWER
- [Symbol] EXISTING DOMESTIC WATER
- [Symbol] EXISTING STORM DRAIN
- [Symbol] PROPOSED ASPHALT PAVING
- [Symbol] EXISTING ASPHALT PAVING



GINKGO STONEHOUSE PROPERTY
 SCALE: 1"=50'

- NOTES:**
- EXISTING LAND USE:
 LOT NOS. 2, 8, 9 & 10 TYPE OF USE: EXISTING RESIDENCE TO BE DEMOLISHED
 1, 3, 4, 5, 6, & 7 UNDEVELOPED
 - ZONING:
 EXISTING - HILLSIDE RESIDENTIAL
 PROPOSED - HILLSIDE RESIDENTIAL
 - A PROPOSED HOMEOWNERS ASSOCIATION WILL MAINTAIN STREET 'A' AND PRIVATE DRAINAGE
 - PROPOSED ACCESS EASEMENTS WILL BE PAVED WITH ASPHALT OR CONCRETE PAVING.
 - SEWER AND WATER MAIN LINES WILL BE EXTENDED UP STREET 'A' AND THE PROPOSED ACCESS EASEMENTS TO CONNECT PROPOSED LOTS TO CITY OF SIERRA MADRE SEWER AND WATER SYSTEMS.
 - EARTHWORK QUANTITIES:
 CUT: 13,000 CUBIC YARDS
 FILL: 13,000 CUBIC YARDS
 - ASSESSOR PARCEL NOS. 5764-001-017 & 5764-001-018
 - TOPOGRAPHY SOURCE: AERIAL SURVEY 2005 W/ FIELD SURVEY FOR LOT LINE ADJUSTMENT IN 2009

