

May 10, 2023

Project No. RCE-22136-01 Ninyo&Moore Project No: 208829001

- TO: Industrial Outdoor Ventures 10 N. Martingale Rd., Suite 560 Schaumburg, IL 60173
- ATTENTION: Rob Chase
- SUBJECT: Response to City Geotechnical Review for MA22123, Proposed New Warehouse/Retail Facility, Riverside Drive (APN 156-030-016, -017 and -042), City of Jurupa Valley, California
- REFERENCE: Soil Exploration Co., Inc., "Preliminary Soil Investigation, Liquefaction Evaluation and Infiltration Tests Report, Proposed Construction Equipment Rental Facility, Riverside Drive (APN 156-030-016, -017 and -042), City of Jurupa Valley, California", Dated September 12, 2019 (Project No. 1826-01).

Rodriguez Consulting and Engineering," Soil Report & Seismic (CBC 2019) Update, Proposed New Warehouse/Retail Facility, Riverside Drive (APN 156-030-016, -017 and -042), City of Jurupa Valley, California", Dated

Introduction/Items Response

As requested, we have prepared the following response to the subject review comments dated April 7, 2023.

Comment No. 1: Rodriguez Consulting and Engineering is new geotechnical consultant of record for the subject site. After reviewing the above referenced report, the updated site plan (dated 5/23/2023), conceptual gradings (See Attachments), all pertinent geology maps for the area (including geologic hazard maps), we have come to the conclusion that the latest proposed development, the existing site condition, the scope of work and geologic hazards are remain the same. Recommendations presented in the previous reports and additional recommendations based on our observations/testing of any site grading and inspection of foundation excavations will be followed during construction. The current grading plans will be reviewed for conformance with the report. Rodriguez consulting and Engineering should review any changes in the project and modify and approve in writing the conclusions and recommendations of this report.

Comment No. 2:

California Building Code (CBC) 2019 Update

2022 CBC – SEISMIC PARAMETERS				
CITE COODDINATES	LATITUDE	LONGITUDE		
SITE COORDINATES	34.0193	-117.5459		

Mapped Spectral Response Acceleration	$S_s = 1.618$	$S_1 = 0.59$	
Site Coefficients (Class "D")	$\mathbf{F}_{\mathbf{a}} = 1.0$	$F_v = 1.7$	
Maximum Considered Earthquake (MCE) Spectral Response Acceleration	S _{MS} = 1.618	S _{M1} = 1.00	
Design Spectral Response Acceleration Parameters	ectral Response Acceleration Parameters S _{DS} = 1.079 S _{D1}		
Seismic Design Category	D		
Peak Ground Acceleration (PGA)	0.676g		
Site Amplification factor at PGA (FPGA)	1.1		
Site Modified Peak Ground Acceleration (PGAm)	0.743		

References:

- Earthquake.usgs.gov/research/hazmaps/design
- 2022 California Building Code, California Code of Regulations, Title 24, Part 2, Volume 2 of 2, Section 1613, Earthquake Loads

Liquefaction Analysis/Dynamic Settlement: LiquefyPro

Liquefaction susceptibility using Standard Penetration Test data and laboratory Gain size test results were analyzed using LiquefyPro software (Version 5.5g). A predominant earthquake magnitude of 6.8 (USGS Interactive Deaggregation, 10% probability of exceedance in 50 years) was used. An associated ground acceleration of 0.5g (equivalent to two-thirds of PGAM), and a depth to groundwater of 175 feet below the existing ground surface were used in our liquefaction evaluation. The software output is presented in Appendix B.

The main observations of the results are as follows:

Boring	Total	Differential Settlement
No.	settlement	(inch)
	(inch)	
B-3	0.24	0.122 to 0.161

• Onsite soils at the site in general have a Safety Factor of 5.0 against liquefaction

Comment No. 3: The slopes that descend towards the site is roughly 30 feet high and slope ratio of 2.5:1(from Adkan Engineers). No evidence of significant slope instability and erosion were observed at the time this work was performed.

Comment No. 4: Over-excavation for masonry block walls/retaining walls should be at least one (1) foot below bottom of footings and one (1) foot laterally beyond the walls area (where practical). Rodriguez Consulting and Engineering should observe footing excavation and prior to placement of footing materials.

Comment No. 5: (See Appendix A for References).

Comment No.6:

Infiltration Test/Tabulated Test Results

Test No.	Depth of Test (feet)	Earth Material	Measured Infiltration Rate (in/hr)	Measured Infiltration Rate, inch/hr, K _M *(corrected for test- specific bias)	Design Infiltration Rate, in/hr, K _{DESIGN} = Km /S _{TOT}
I-1	6	Silty Sand (SM)	9.5	4.75	2.38
I-2	6	Silty Sand (SM)	2.3	1.15	0.58

Factor Category		Factor Description Assigned Weight (w) V		Factor Value (v)	Product (p) p = w x v	
		Soil assessment methods	0.25	1	0.25	
		Predominant soil texture	0.25	1	0.25	
A	Suitability Assessment	Site soil variability	0.25	1	0.25	
	Absessment	Depth to groundwater / impervious layer	epth to groundwater / impervious yer 0.25		0.25	
		Suitability Assessment Safety Fac	Suitability Assessment Safety Factor, $S_A = \sum p$			
	Design	Tributary area size	0.25	2	0.5	
в		Level of pretreatment/ expected sediment loads	0.25	2	0.5	
		Redundancy	0.25	2	0.5	
		Compaction during construction	0.25	1	0.25	
	Design Safety Factor, $S_B = \sum p$				1.75	
Combined Safety Factor, STOT= SA x SB					1.75(use 2.0)	

• *A minimum required factor of safety of 2 was applied to the measured infiltration rates.

- Based on the test results, the design infiltration rate obtained from the field is greater than 0.3 inches per hour. Therefore, soils are considered potentially feasible for infiltration.
- The design infiltration rate of 0.58 in/hr. should be used for the infiltration facility.
- The distance between the infiltration facility and the adjacent private property, any building and walls shall be a minimum of 10 feet.

Comment No. 7: The distance of the proposed retaining wall from the bottom of the east side of the infiltration basin is roughly 22 feet. Therefore, the potential for infiltration water to migrate laterally toward the retaining wall is nil.

Comment No. 8: The conceptual grading plans that were submitted to the City were reviewed and the future precise grading plans and foundation plans will be reviewed for conformance with the report. Rodriguez consulting and Engineering should review any changes in the project and modify and approve in writing the conclusions and recommendations of this report.

<u>Closure</u>

We sincerely hope that the above will suffice to expedite the city review process. Should you have any questions or concerns please do not hesitate to call this office.

Very truly yours,



Gene K. Luu, PE 53= Project Engineer

Distribution: [1] Addressee

Attachments:	Figure 1	Site Plan
	Figure 2	Conceptual Grading Plans

Appendix AReferencesAppendix BLiquefaction Analysis

SCALE:



CALIFORNIA IN THE CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE O

SDP22038 Eb:91 J/F U) U) KQ'YZI S/TE NEW WAREHOUSE NO. EZ 092 M.IE.10.15 一日のエ PRO,

DRIV RIVERSID



GENERAL NOTES

- APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK TO BE PERFORMED UNTIL A PERMIT HAS BEEN ISSUED
- 2. THE APPROVAL OF THIS PLAN OR ISSUANCE OF A PERMIT BY THE CITY DOES NOT AUTHORIZE THE SUBDIVIDER AND/OR OWNER TO VIOLATE ANY FEDERAL, STATE, COUNTY, OR CITY LAWS, ORDINANCES, REGULATIONS, OR POLICIES.
- 3. ALL GRADING SHALL CONFORM TO THE 2022 CALIFORNIA BUILDING CODE CHAPTER 17, 18, & APPENDIX J AS
- AMENDED BY ORDINANCE 457 AND CITY OF JURUPA VALLEY MUNICIPAL CODE (TITLE 8). 4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEY MONUMENTS AND/OR VERTICAL CONTROL BENCHMARKS WHICH ARE DISTURBED OR DESTROYED BY CONSTRUCTION. A LAND SURVEYOR SHALL REPLACE SUCH MONUMENTS WITH APPROPRIATE MONUMENTS, A CORNER RECORD OR RECORD OF SURVEY, AS APPROPRIATE, SHALL BE FILED AS REQUIRED BY THE PROFESSIONAL LAND SURVEYORS ACT, SECTION & THE BUSINESS AND PROFESSIONS CODE OF THE STATE OF CALIFORNIA. IF ANY VERTICAL CONTROL IS TO BE DISTURBED OR DESTROYED, THE CITY OF JURUPA VALLEY MUST BE NOTIFIED, IN WRITING, AT LEAST THREE (3) DAYS PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE COST OF REPLACING ANY VERTICAL CONTROL BENCHMARKS DESTROYED BY THE CONSTRUCTION.
- 5. ALL PROPERTY CORNERS, GRADING BOUNDARIES AND ALL CONSERVATION AREAS/LEAST SENSITIVE AREA (LSA) DETERMINED BY THE ENVIRONMENTAL PROGRAMS DEPARTMENT (EPD) SHALL BE CLEARLY DELINEATED AND STAKED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION/GRADING
- 6. ALL WORK UNDER THIS PERMIT SHALL BE LIMITED TO WORK WITHIN THE PROPERTY LINES. ALL WORK WITHIN THE ROAD RIGHT-OF-WAY WILL REQUIRE SEPARATE PLANS AND A SEPARATE REVIEW-APPROVAL (PERMIT) FROM THE TRANSPORTATION DEPARTMENT.
- 7. ALL GRADING SHALL BE DONE UNDER THE SUPERVISION OF A SOILS ENGINEER IN CONFORMANCE WITH THE RECOMMENDATIONS OF THE PRELIMINARY SOILS INVESTIGATION PREPARED BY SOILS EXPLORATION INC. DATED SEPTEMBER 12, 2019 AND SOILS REPORT & SEISMIC (CBC 2019) UPDATE BY RODRIGUEZ CONSULTING AND ENGINEERING DATED AUGUST 24, 2022.
- 8. COMPACTED FILL TO SUPPORT ANY STRUCTURES SHALL COMPLY WITH SECTION 1803.5.8. PROJECTS WITHOUT A PRELIMINARY SOILS REPORT SHALL INCLUDE DETAILED SPECIFICATIONS IN ACCORDANCE WITH SECTIONS 1803.2 AND 1803.5 PREPARED BY THE ENGINEER OF RECORD.
- THE CONTRACTOR SHALL NOTIFY THE BUILDING AND SAFETY DEPARTMENT AT LEAST 24 HOURS IN ADVANCE TO REQUEST FINISH LOT GRADE AND DRAINAGE INSPECTION. THIS INSPECTION MUST BE APPROVED PRIOR TO BUILDING PERMIT FINAL INSPECTION FOR EACH LOT.
- 10. PER SECTION 4216 OF THE GOVERNMENT CODE, THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT, TWO (2) DAYS PRIOR TO DIGGING AT 1-800-422-4133.
- II. PRIOR TO GRADING, A MEETING SHALL BE SCHEDULED WITH A RIVERSIDE COUNTY ENVIRONMENTAL COMPLIANCE INSPECTOR PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.

CUT/FILL

- MAXIMUM CUT AND FILL SLOPE SHALL BE 2:1, HORIZONTAL TO VERTICAL
- 2. NO FILL SHALL BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, TOPSOIL AND OTHER DELETERIOUS MATERIAL. FILLS SHOULD BE PLACED IN THIN LIFTS (8-INCH MAX OR AS RECOMMENCED IN THE SOILS REPORT), COMPACTED AND TESTED THROUGHOUT THE GRADING PROCESS UNTIL FINAL GRADES ARE ATTAINED. ALL FILLS ON SLOPES STEEPER THAN 5:1, HORIZONTAL TO VERTICAL, AND A HEIGHT GREATER THAN FIVE (5) FEET SHALL BE KEYED AND BENCHED INTO FIRM NATURAL SOIL FOR FULL SUPPORT. THE BENCH UNDER THE TOE MUST BE TEN (10) FEET WIDE MINIMUM.
- 3. THE SLOPE STABILITY FOR CUT AND FILL SLOPES OVER THIRTY (30) FEET IN VERTICAL HEIGHT, OR CUT SLOPES STEEPER THAN 2: I HAVE BEEN VERIFIED WITH A FACTOR OF SAFETY OF AT LEAST 1.5. 4. NO ROCK OR SIMILAR IRREDUCIBLE MATERIAL WITH A MAXIMUM DIMENSION GREATER THAN TWELVE (12) INCHES
- SHALL BE BURIED OR PLACED IN FILLS CLOSER THAN TEN (10) FEET TO THE FINISHED GRADE

COMPLETION OF WORK NOTES

- FOR ROUGH GRADING PLANS, A REGISTERED CIVIL ENGINEER SHALL PREPARE FINAL COMPACTION REPORT/GRADING REPORT AND IT SHALL BE SUBMITTED TO THE DEPARTMENT OF BUILDING AND SAFETY FOR REVIEW AND APPROVAL. THE REPORT SHALL INCLUDE BUILDING FOUNDATION DESIGN PARAMETERS, EXPANSION INDEX, DESIGN ALTERNATIVES (IF IE > 20), WATER SOLUBLE SULFATE CONTENT, CORROSIVITY AND REMEDIAL MEASURE IF NECESSARY.
- 2. FOR ROUGH GRADING PLANS, EXCEPT FOR NON-TRACT SINGLE RESIDENTIAL ROUGH GRADING, THE COMPACTION REPORT SHALL INCLUDE THE SPECIAL INSPECTION VERIFICATIONS LISTED ON TABLE 1705.6 OF 2019 CALIFORNIA BUILDING CODE.
- 3. FOR ROUGH GRADING, IN ADDITION TO OBTAINING ALL REQUIRED INSPECTIONS AND APPROVAL OF ALL FINAL REPORTS, ALL SITES PERMITTED FOR ROUGH GRADE ONLY SHALL PROVIDE VEGETATIVE COVERAGE (100%) OR OTHER MEANS OF SITE STABILIZATION APPROVED BY ENVIRONMENTAL COMPLIANCE DIVISION, PRIOR TO RECEIVING A ROUGH GRADE PERMIT FINAL SIGNATURE.
- 4. FOR PRECISE GRADING, A REGISTERED CIVIL ENGINEER SHALL SUBMIT TO THE BUILDING AND SAFETY DEPARTMENT WRITTEN FINAL CERTIFICATION OF COMPLETION OF GRADING IN ACCORDANCE WITH THE APPROVED GRADING PLAN PRIOR TO THE REQUEST OF PRECISE GRADING INSPECTION.

DRAINAGE, EROSION/DUST CONTROL

- DRAINAGE ACROSS PROPERTY LINES SHALL NOT EXCEED THAT WHICH EXISTED PRIOR TO GRADING. EXCESS OR CONCENTRATED DRAINAGE SHALL BE CONTAINED ON SITE OR DIRECTED TO AN APPROVED DRAINAGE FACILITY. EROSION OF THE GROUND IN THE AREA OF DISCHARGE SHALL BE PREVENTED BY INSTALLATION OF NON-EROSIVE DOWN DRAINS OR OTHER DEVICES.
- 2. THE CONTRACTOR SHALL PROVIDE A PAVED SLOPE INTERCEPTOR DRAIN ALONG THE TOP OF CUT SLOPES WHERE THE DRAINAGE PATH IS GREATER THAN FORTY (40) FEET TOWARDS THE CUT SLOPE.
- 3. THE CONTRACTOR SHALL PROVIDE FIVE (5) FEET WIDE BY ONE (1) FOOT HIGH BERM ALONG THE TOP OF ALL FILL SLOPES STEEPER THAN 3:1. HORIZONTAL TO VERTICAL.
- 4. THE GROUND SURFACE IMMEDIATELY ADJACENT TO THE BUILDING FOUNDATION SHALL BE SLOPED AWAY FROM THE BUILDING AT A SLOPE OF NOT LESS THAN ONE UNIT VERTICAL IN 20 UNITS HORIZONTAL (5% SLOPE) FOR A MINIMUM DISTANCE OF TEN (10) FEET MEASURED PERPENDICULAR TO THE FACE OF THE FOUNDATION. NO OBSTRUCTION OF NATURAL WATER COURSES SHALL BE PERMITTED
- 6. DURING ROUGH GRADING OPERATIONS AND PRIOR TO CONSTRUCTION OF PERMANENT DRAINAGE STRUCTURES, TEMPORARY DRAINAGE CONTROL (BEST MANAGEMENT PRACTICES, BMPs) SHALL BE PROVIDED TO PREVENT PONDING WATER AND DRAINAGE TO ADJACENT PROPERTIES.
- DUST CONTROL SHALL BE CONTROLLED BY WATERING OR OTHER APPROVED METHODS. 8. CONSTRUCTION SITES SUBJECT TO PMIO FUGITIVE DUST MITIGATION SHALL COMPLY WITH AQMD RULE 403.1.
- 9. ALL EXISTING DRAINAGE COURSES AND STORM DRAIN FACILITIES SHALL CONTINUE TO FUNCTION. PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING GRADING OPERATIONS.
- 10. FOR ALL SLOPES EQUAL TO OR GREATER THAN THREE (3) FEET IN VERTICAL HEIGHT ARE REQUIRED TO BE PLANTED WITH AN APPROVED DROUGHT-TOLERANT GROUND COVER AT A MINIMUM SPACING OF 12" ON CENTER OR AS APPROVED BY THE ENGINEER OF RECORD OR THE REGISTERED LANDSCAPE ARCHITECT AND DROUGHT-TOLERANT SHRUBS SPACED AT NO MORE THAN IO' ON CENTER, OR TREES SPACED NOT TO EXCEED 20' ON CENTER, OR A COMBINATION OF SHRUBS AND TREES NOT TO EXCEED 15' IN ADDITION TO THE GRASS OR GROUND COVER, SLOPES THAT REQUIRE PLANTING SHALL BE PROVIDED WITH AN IN-GROUND IRRIGATION SYSTEM EQUIPPED WITH AN APPROPRIATE BACKFLOW DEVICE PER C.P.C. CHAPTER 6. THE SLOPE PLANTING AND IRRIGATION SYSTEM SHALL BE INSTALLED AS SOON AS POSSIBLE UPON COMPLETION OF ROUGH GRADING. ALL PERMANENT SLOPE PLANTING SHALL BE ESTABLISHED AND IN GOOD CONDITION PRIOR TO SCHEDULING PRECISE GRADE INSPECTION.

LEGAL DESCRIPTIONS

THE LAND REFERRED TO HEREIN IS SITUATED IN THE STATE OF CALIFORNIA, COUNTY OF RIVERSIDE, AND IS DESCRIBED AS FOLLOWS:

PARCEL I (APN: 156-030-042):

THAT PORTION OF THE SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 2 SOUTH, RANGE 6 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS

COMMENCING AT THE SOUTHEAST CORNER OF SAID SECTION 6, SAID CORNER BEING THE INTERSECTION OF THE CENTERLINE OF RIVERSIDE DRIVE (40.00 FEET IN HALF WIDTH) WITH THE CENTERLINE OF WINEVILLE ROAD (30.00 FEET IN HALF WIDTH); THENCE NORTH 88° 24' 44" WEST ALONG SAID CENTERLINE OF RIVERSIDE DRIVE, A DISTANCE OF 488.80 FEET; THENCE NORTH OI® 35' 16" EAST, AT A RIGHT ANGLE, A DISTANCE OF 40.00 FEET TO THE TRUE POINT OF BEGINNING, SAID POINT BEING ON THE NORTHERLY RIGHT-OF-WAY LINE OF SAID RIVERSIDE DRIVE AS GRANTED TO THE COUNTY OF RIVERSIDE BY DEED RECORDED JUNE 20, 1950 AS INSTRUMENT NO. 2603, IN BOOK 1182, PAGE 304, OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE NORTH 88° 24'44" WEST ALONG SAID RIGHT-OF-WAY LINE, A DISTANCE OF 829.15 FEET TO THE SOUTHEASTERLY CORNER OF THAT CERTAIN PARCEL OF LAND GRANTED TO DFA, LLC, A NEVADA LIMITED LIABILITY COMPANY, BY GRANT DEED RECORDED MARCH 26, 1999 AS INSTRUMENT NO. 127153, OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE NORTH OI 01' 44" EAST ALONG THE EASTERLY LINE OF SAID PARCEL, A DISTANCE OF 260.23 FEET TO THE NORTHEASTERLY CORNER THEREOF, SAID CORNER ALSO BEING THE SOUTHWESTERLY CORNER OF THAT CERTAIN PARCEL OF LAND AS DESCRIBED IN THE FINAL ORDER OF CONDEMNATION TO THE STATE OF CALIFORNIA, NO. 115212, RECORDED SEPTEMBER 23, 1977 AS INSTRUMENT NO. 188150, OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE SOUTH 71° 00'36" EAST ALONG THE SOUTHWESTERLY LINE OF SAID PARCEL OF LAND DESCRIBED IN DOCUMENT RECORDED SEPTEMBER 23, 1977 AS INSTRUMENT NO. 188150, OF OFFICIAL RECORDS, A DISTANCE OF 848.43 FEET TO A POINT THEREON; THENCE SOUTH OIº 35' 16" WEST, A DISTANCE OF 92.49 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL 2 (APN: 156-030-016; APN: 156-030-017):

THAT PORTION OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 6, TOWNSHIP 2 SOUTH, RANGE 6 WEST, SAN BERNARDINO MERIDIAN, IN THE CITY OF JURUPA VALLEY, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS: BEGINNING AT A POINT ON THE WEST LINE OF THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 6 DISTANT SOUTH OO® 04'25" EAST, 203.46 FEET FROM THE INTERSECTION OF SAID WEST LINE WITH THE SOUTHEASTERLY LINE OF THE LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDED NOVEMBER 25, 1968 AS INSTRUMENT NO. 113381, OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, BEING A POINT ON THE SOUTHEASTERLY LINE OF THE LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDED OCTOBER 31, 1973 AS INSTRUMENT NO. 142429, OF OFFICIAL RECORDS OF RIVERSIDE COUNTY, CALIFORNIA, BEING A POINT ON THE SOUTHEASTERLY LINE OF THE LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE NORTHEASTERLY LINE OF SAID LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE NORTHEASTERLY LINE OF SAID LAND CONVEYED TO THE SOUTHEASTERLY LINE OF THE LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE NORTHEASTERLY LINE OF SAID LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDS OF RIVERSIDE COUNTY, CALIFORNIA; THENCE NORTHEASTERLY LINE OF SAID LAND CONVEYED TO THE SOUTHEASTERLY LINE OF SOUTHEASTERLY LINE OF THE SOUTHEASTERLY LINE OF THE SOUTHEASTERLY LINE OF SAID LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDS OF REET, THENCE NORTHEAST AUARTER OF 659.12 FEET; THENCE SOUTH T1° 59'00" EAST, ALONG THE SOUTHEASTERLY LINE OF SAID LAND CONVEYED TO THE STATE OF CALIFORNIA, BY DEED RECORDS OF REET, THENCE MARTER OF SAID SECTION 6, A DISTANCE OF 659.25 FEET, FEET TO THE EASTERLY LINE OF THE EASTERLY LINE OF THE SOUTHEAST AUARTER OF THE SHEET INDEX SHEET I SHEETS 2-4 CONCEPTUAL GRADING SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 6; THENCE ALONG SAID WEST LINE NORTH O° O4'25" WEST 10.01 FEET, MORE OR LESS, TO THE POINT OF 1 IMPOPTANT NOTE.

NO WORK SHALL BE DONE ON THIS SITE UNTIL BELOW AGENCY IS NOTIFIED OF INTENTION TO GRADE OR EXCAVATE Underground Service Alert -800

TWO WORKING DAYS BEFORE YO



MPURIANT NUTE:	
THE GRADING AND/OR IMPROVEMENT PLANS ARE APPROVED FOR A PERIOD OF TWO (2) YEARS FROM THE DATE SIGNED BY THE	
CITY ENGINEER. AFTER THE TWO (2) YEAR PERIOD HAS LAPSED,	
THE ENGINEER OF RECORD MAY BE REQUIRED TO SUBMIT AND PROCESS FOR CITY ENGINEER APPROVAL, UPDATED PLANS THAT	┝
COMPLY WITH THE MOST CURRENT CITY STANDARDS, PRACTICES,	M.
AND PULICIES.	

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AC ASPHALT CONCRET AP ANGLE POINT BW BACK OF WALK CB CATCH BASIN CF CURB FACE C&G CURB & GUTTER EG EXISTING GRADE FG FINISHED GRADE FL FLOWLINE FS FINISHED SURFACE GB GRADE BREAK HP HIGH POINT	E LS LANDSCAPE INV INVERT O.C. OFF CENTER PROP. PROPOSED R/W RIGHT OF WA SD STORM DRAII TB TOP OF AC E TC TOP OF CURE TF TOP OF GRA TG TOP OF GRA TW TOP OF WALL TYP TYPICAL
CAL	
R/W	
FLOWLINE	
PROP. WATER LATERAL	
PROP. FIRE SERVICE	
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TOPO MAJOR	
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EX. E/P	
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EX. 16" WATER	EX. 16"W
EX. 30" WATER	EX. W
PROPERTY LINE	<u>.</u>
BOUNDARY FENCE	
RETAINING WALL	
DEEPENED FOOTING	
LANDSCAPE	``\$`\$`\$
CONCRETE	
TRENCH	
EARTH	

ARK DATE





OFF CENTER PROPOSED RIGHT OF WAY STORM DRAIN TOP OF AC BERI TOP OF CURB TOP OF FOOTING TOP OF GRATE TOP OF WALL TYPICAL	•
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CONSTRUCTION NOTES & QUANTITIES

SCALE: |" = 150

THE QUANTITIES SHOWN BELOW ARE FOR BONDING PURPOSES ONLY. THE CONTRACTOR IS TO CO PROJECT PER THESE PLANS AND SUBMIT BID BASED ON THEIR OWN QUANTITY "TAKE-OFF."	NSTRUCT
() INSTALL 3" AC PAVEMENT OVER 4" BASE PER SOILS REPORT	173,754 SF
(2) CONSTRUCT O" CURB PER COUNTY OF RIVERSIDE STD. 204	725 LF
(3) CONSTRUCT 6" CURB AND GUTTER PER COUNTY OF RIVERSIDE STD. 200	2,633 LF
(4) CONSTRUCT 4' WIDE VALLEY GUTTER PER DETAIL ON SHEET 3	475 LF
5 CONSTRUCT CONCRETE SIDEWALK PER COUNTY OF RIVERSIDE STD. 401 - WIDTH PER PLAN	9,237 SF
6 CONSTRUCT COMMERCIAL DRIVEWAY PER COUNTY OF RIVERSIDE STD. 201A	5 EA
() INSTALL ADA PARKING AND PATH STRIPING PER DETAILS ON SHEET 2	<i>1,020 S</i> F
() INSTALL PARKING STRIPING	
() CONSTRUCT RETAINING WALL - HEIGHT PER PLAN	
O Install wheel stop per detail on sheet 3	92 EA
(I) CONSTRUCT DEEPENED FOOTING - DEPTH PER PLAN	82 LF
(2) CONSTRUCT 2' WIDE CONCRETE V-DITCH	
(3) INSTALL UNDER SIDEWALK DRAIN PER COUNTY OF RIVERSIDE STD. 309	I EA
(14) INSTALL 4' CURB CUT	3 EA
(5) CONSTRUCT 1' WIDE INFILTRATION TRENCH - SEE WOMP FOR DETAILS	6,273 SF
(6) INSTALL 18" STORM DRAIN - SEE WQMP FOR DETAILS	193 LF
(17) INSTALL IO" SEWER LINE	843 LF
(B) INSTALL SEWER MANHOLE	6 EA
(19) INSTALL 6" SEWER LATERAL	953 LF
ØINSTALL 2" WATER LATERAL	231 LF
2) INSTALL TRUNCATED DOMES	158 SF
2 INSTALL 6" CURB PER COUNTY OF RIVERSIDE STD. 200	I,490 LF
3 INSTAL 6" FIRE SERVICE LINE	

0	LINE OF QUARTER BEGINNING	THE EAST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF S/ OF THE SOUTHEAST QUARTER OF SAID SECTION 6, A DISTANCE OF 658.88 FEET ⁵ .	AID S. TO TH	ECTION IE WES	N 6, A T LINE	DISTANCE OF 260.25 FEET, OF THE EAST HALF OF THE	CITY OF JURUPA VALLEY BUSINESS TAX ACCT. No. 0009
	INITIAL	DESCRIPTION REVISION	REC.	APPR	DATE	NO. 80614 * EXP. 03-31-25 *	PLANS PREPARED BY: PLANS

IO N. MARTINGALE ROAD #560

I-P

I-P

ASSESSORS PARCEL NUMBERS

VFRIZON

FILL: 6,228 CY

VACANT

6.88 ACRES

6.TT ACRES

SCHAUMBURG, IL 60173

TEL (224) 369 - 4341

FAX (260) 760 - 1221

EXISTING ZONING:

PROJECT AREA:

ZONE X

WATER:

SEWER:

ELECTRICITY:

TELEPHONE:

CUT: 8,290 CY

TOPOGRAPHY

SCHOOL DISTRICT:

EARTHWORK QUANTITIES

OFF PRIOR RO CONSTRUCTION.

ENGINEERS ON 3-20-2018

BASIS OF BEARING

SOILS ENGINEER

7535 JURUPA AVE., UNIT C RIVERSIDE CA, 92504

PHONE (951) 688-7200

FAX (951) 688-7100

NOTE

SOILS EXPLORATION COMPANY, INC.

TITLE SHEET

IMPORT/EXPORT: 2,062 CY EXPORT

GAS:

CATV:

DISTURBED AREA:

PROPOSED ZONING:

EXISTING LANDUSE:

PROPOSED LANDUSE:

SITE STATISTICS

156-030-016, 017, 042

UTILITY PURVEYORS

ZONING/LAND USE

adkar ENGINEERS 6879 AIRPORT DRIVE

RIVERSIDE, CA. 92504 951-688-0241

LIGHT INDUSTRIAL BUILDING

FEMA FLOODZONE DESIGNATION

JURUPA COMMUNITY SERVICES DISTRICT JURUPA COMMUNITY SERVICES DISTRICT SOUTHERN CALIFORNIA GAS COMPANY SOUTHERN CALIFORNIA EDISON

CHARTER COMMUNICATIONS CORONA-NORCO UNIFIED SCHOOL DISTRICT

THE QUANTITY SHOWN ABOVE IS FOR DISCUSSION PURPOSES ONLY. SHRINKAGE, SUBSIDENCE, AND SURFACE FACTORS ARE NOT INCLUDED. CONTRACTOR TO COMPLETE THEIR OWN TAKE

TOPOGRAPHY SOURCE TAKEN FROM SURVEY CONDUCTED BY ADKAN

THE BEARINGS SHOWN HEREON ARE BASED ON THE CENTERLINE OF RIVERSIDE AVE, NOB W PER PM NO. 35125, PMB 234/21-23

NEW UTILITIES TO BE LOCATED UNDERGROUND WALLS TO BE TREATED WITH ANTI-GRAFFITI COATING ALL RIGHT OF WAY NORTH OF THE SITE IS CALTRANS RIGHT OF WAY

ABUTTER'S RIGHTS RESTRICTIONS ALONG THE REAR PROPERTY LINE ARE PER RECORDING NUMBERS: 113380, 113381, 90290, \$ 142429

94 EXP. 9-7-23

75 1 Date: NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES

- CONSTRUCTION SITE BMPS FOR THE MANAGEMENT OF STORM WATER AND NON-STORMWATER DISCHARGES SHALL BE DOCUMENTED ON THE GRADING PLAN. ARRANGEMENTS SHALL BE MADE BY THE DEVELOPER TO RETAIN THE SWIPPP ON THE JOBSITE THROUGHOUT THE TIME OF CONSTRUCTION. THE IMPLEMENTATION AND MAINTENANCE OF THE SITE BMP\$ IS REQUIRED TO MINIMIZE JOBSITE EROSION AND SEDIMENTATION, ARRANGEMENTS SHALL BE MADE BY THE DEVELOPER TO MAINTAIN THOSE BMPS THROUGHOUT THE TIME OF CONSTRUCTION.
- 2. EROSION CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE ENTRAINMENT OF SOIL IN RUBOFF FROM DISTURBED SOIL AREAS ON CONSTRUCTION SITES. 3. SEDIMENT CONTROL BMPS SHALL BE IMPLEMENTED AND MAINTAINED TO PREVENT AND/OR MINIMIZE THE
- TRANSPORT OF SOIL FROM THE CONSTRUCTION SITE. GRADING SHALL BE PHASED TO LIMIT THE AMOUNT OF DISTURBED AREA EXPOSED TO THE EXTENT FEASIBLE. 5. AREAS THAT ARE CLEARED AND GRADED SHALL BE LIMITED TO OBLY THE PORTION OF THE SITE THAT IS
- NECESSARY FOR CONSTRUCTION. THE CONSTRUCTION SITE SHALL BE LIMITED TO ONLY THE PORTION OF THE SITE THAT IS NECESSARY FOR CONSTRUCTION. THE CONSTRUCTION SITE SHALL BE MANAGED TO MINIMIZE THE EXPOSURE TIME OF DISTURBED SOIL AREAS THROUGH PHASING AND SCHEDULING OF GRADING AND THE USE OF TEMPORARY AND PERMANENT SOIL STABILIZATION.
- 6. IF DISTURBED, SLOPES (TEMPORARY OR PERMANENT) SHALL BE STABILIZED IF THEY WILL NOT BE WORKED WITHIN 21 DAYS. DURING STORM SEASON, ALL SLOPES SHALL BE STABILIZED PRIOR TO PREDICTED STORM EVEN. CONSTRUCTION SITES SHALL BE REVEGETATED AS EARLY AS FEASIBLE AFTER SOIL DISTURBANCE.
- STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO ELIMINATE OF REDUCE SEDIMENT TRANSPORT FROM THE SITE OR STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
- B. CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OTHER THAN STORMWATER (NON-STORMWATER DISCHARGES) ARE PROHIBITED, EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT, THE STATEWIDE GENERAL PERMIT-CONSTRUCTION ACTIVITY. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SOIL OR LIQUID CHEMICAL SPILLS; WASTES FROM PAINTS, STAINS, SEALANTS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICIDES HERBICIDES, FERTILIZERS, WOOD PRESERVATIVES, AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS, FUEL, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS, CONCRETE AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FROM ENGINE/EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSING AND TESTING. DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED TEMPORARY AREA O-SITE PHYSICALLY SEPARATE FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- RUNOFF FROM EQUIPMENT AND VEHICLE STASHING SHALL BE CONTAINED AT CONSTRUCTION SITE AND MUST NOT BE DISCHARGED TO RECEIVING WATERS OR LOCAL STORM DRAIN SYSTEM. APPROPRIATE BMPS FOR CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE
- IMPLEMENTED TO ELIMINATE OR REDUCE TRANSPORT FRO THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTIES BY WIND OR RUNOFF. ALL CONSTRUCTION CONTRACTORS AND SUBCONTRACTOR PERSONNEL ARE TO BE TRAINED IN THE
- IMPLEMENTATION AND USE OF THE REQUIRED BMPS AND GOOD HOUSEKEEPING MEASURE FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS AND ALL TRAINING DOCUMENTATION SHALL BE MAINTAINED IN THE SWPPP DISCHARGING CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED
- INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES MAY REQUIRE A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE REGIONAL WATER QUALITY CONTROL BOARD. 13. BMPs SHALL BE MAINTAINED AT ALL TIMES. IN ADDITION, BMPs SHALL BE INSPECTED PRIOR TO PREDICTED
- STORM EVENTS AND FOLLOWING STORM EVENTS. 14. AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY, ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED OF IN TRASH OR RECYCLE BINS.

DECLARATION OF ENGINEER OF RECORD

I HEREBY DECLARE THAT THE DESIGN OF THE IMPROVEMENTS AS SHOWN ON THESE PLANS COMPLIES WITH PROFESSIONAL ENGINEERING STANDARDS AND PRACTICES. AS THE ENGINEER IN RESPONSIBLE CHARGE OF DESIGN OF THESE IMPROVEMENTS, I ASSUME FULL RESPONSIBLE CHARGE FOR SUCH DESIGN.

UNDERSTAND AND ACKNOWLEDGE THAT THE PLAN CHECK OF THESE PLANS BY THE CITY OF JURUPA VALLEY IS A REVIEW FOR THE LIMITED PURPOSE OF ENSURING THAT THE PLANS COMPLY WITH CITY PROCEDURES, APPLICABLE POLICIES AND ORDINANCES. THE PLAN CHECK IS NOT A DETERMINATION OF THE TECHNICAL ADEQUACY OF THE DESIGN OF THE IMPROVEMENTS. SUCK PLAN CHECK DOES NOT, THEREFORE, RELIEVE ME OF MY RESPONSIBILITY FOR THE DESIGN OF THESE IMPROVEMENTS. AS ENGINEER OF RECORD (EOR), I AGREE TO INDEMNIFY AND HOLD THE CITY OF JURUPA VALLEY, THE JURUPA VALLEY HOUSING AUTHORITY, AND THE JURUPA VALLEY COMMUNITY SERVICES DISTRICT (CSD), ITS OFFICERS, AGENTS AND EMPLOYEES HARMLESS FROM ANY AND ALL LIABILITY OF CLAIMS, DAMAGES OR INJURIES TO ANY PERSON OR PROPERTY WHICH MIGHT ARISE FROM THE NEGLIGENT ACTS, ERRORS OR MISSIONS OF THE ENGINEER OF RECORD. I HAVE READ AND INFORMED THE PROJECT APPLICANT/DEVELOPER THAT APPROVAL OF THESE PLANS DO NOT RELIEVE THEM FROM THE REQUIREMENTS OF THE CONDITIONS OF APPROVAL (ATTACHED HEREIN OR IN OTHER APPROVED IMPROVEMENT PLANS).

ALSO HEREBY DECLARE THAT I HAVE COMPARED THESE PLANS WITH ALL APPLICABLE ADA TITLE II AND TITLE 24 REQUIREMENTS FOR DISABILITY ACCESS FOR THIS PROJECT, AND THESE PLANS ARE IN FULL COMPLIANCE WITH THOSE REQUIREMENTS.

RICHARD DAIL REAVES R.C.E. 80614 (EXP. 3-31-25) DATE

ENGINEER'S NOTICE TO CONTRACTORS

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY THE SEARCH OF AVAILABLE RECORDS. THESE LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED IN THE FIELD BY THE CONTRACTOR. SO THAT ANY NECESSARY ADJUSTMENT CAN BE MADE IN ALIGNMENT AND/OR GRADE OF THE PROPOSED IMPROVEMENT. THE CONTRACTOR IS REQUIRED TO TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ANY UTILITY FACILITIES SHOWN AND ANY OTHER FACILITIES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE INVITING BIDS" OF THE BID DOCUMENTS





TITLE SHEET

RIVERSIDE DRIVE & WINEVILLE ROAD

NEW LIGHT INDUSTRIAL BUILDING/RETAIL FACILITY

CITY I. D. NO.



PLOT TIME: 5/9/2023 9:14 AM



REVISION

PLOT TIME: 5/9/2023 9:15 AM



				_			CITY OF JURUPA VALLEY BUSINESS TAX ACCT. No. 00094 EXP. 9-7-23
<u> </u>	INITIAL	DESCRIPTION REVISION	REC.	APPR	DATE	NO. 80614 * EXP. 03-31-25 *	PLANS PREPARED BY: Civil Engineering · Surveying · Planning 6879 Airport Drive, Riverside, CA 92504 Tel:(951) 688–0241 · Fax:(951) 688–0599 Under the Supervision of: Richard Dail Reaves, R.C.E. 80614 Exp. 3.31.21 Date:

CONSTRUCTION NOTES & QUANTITIES

() INSTALL 3" AC PAVEMENT OVER 4" BASE PER SOILS REPORT

(2) CONSTRUCT O" CURB PER COUNTY OF RIVERSIDE STD. 204

(3) CONSTRUCT 6" CURB AND GUTTER PER COUNTY OF RIVERSIDE STD. 200

(4) CONSTRUCT 4' WIDE VALLEY GUTTER PER DETAIL ON SHEET 3

(5) CONSTRUCT CONCRETE SIDEWALK PER COUNTY OF RIVERSIDE STD. 401 - WIDTH PER PLAN

6 CONSTRUCT COMMERCIAL DRIVEWAY PER COUNTY OF RIVERSIDE STD. 201A.

 \bigcirc INSTALL ADA PARKING STRIPING PER DETAILS ON SHEET 2

(B) INSTALL PARKING STRIPING

() CONSTRUCT RETAINING WALL - HEIGHT PER PLAN

() INSTALL WHEEL STOP PER DETAIL ON SHEET 3

(I) CONSTRUCT DEEPENED FOOTING - DEPTH PER PLAN

(2) CONSTRUCT 2' WIDE V-DITCH

(3) INSTALL UNDER SIDEWALK DRAIN PER COUNTY OF RIVERSIDE STD. 309

(14) INSTALL 4' CURB CUT

(5) CONSTRUCT 1' WIDE INFILTRATION TRENCH - SEE WAMP FOR DETAILS

(6) INSTALL IB" STORM DRAIN - SEE WAMP FOR DETAILS

(17) INSTALL IO" SEWER LINE

(B) INSTALL SEWER MANHOLE

[1] INSTALL 6" SEWER LATERAL

- ⊘ INSTALL 2" WATER LATERAL
- DINSTALL TRUNCATED DOMES

2 INSTALL 6" CURB PER COUNTY OF RIVERSIDE STD. 200

3 INSTALL 6" FIRE SERVICE LINE

CITY OF JURUPA VALLEY CONCEPTUAL GRADING PLANS

RIVERSIDE DRIVE & WINEVILLE ROAD NEW LIGHT INDUSTRIAL BUILDING/RETAIL FACILITY

CONCEPTUAL GRADING

SHEET <u>4</u> OF <u>4</u> CITY I. D. NO.

ACCT. NO.

PLOT TIME: 5/9/2023 9:15 AM

APPENDIX A

Rodriguez Consulting and Engineering

REFERENCES

- CDMG, Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada, Dated February 1998.
- USGS Geologic Map of the San Bernardino and Santa Ana 30'x60' Quadrangles, California, 2006.
- Riverside County GIS Map.
- U.S. Geological Survey Faults 2014.
- Riverside County Stormwater Quality Best Management Practice, Design Handbook for Low Impact Development, Dated June 2014.
- Civiltech Software LiquefyPro (Version 5.5g)
- ASTM D422 Standard Test Method for Particle-Size Analysis
- California Code of Regulations, Title 24, 2022, "California Building Code," 2 volumes.
- Seed, H.B., Tokimatsu, K., Harder, L.F., and Chung, R.M., (1985), "Influence of SPT Procedures in Soil Liquefaction Resistance Evaluations," Journal of the Geotechnical Engineering Division, American Society of Civil Engineers, Vol. 111, No. GT12, pp. 1425-1445.
- Tokimatsu, K., and Seed, H.B., (1987), "Evaluation of Settlements in Sands Due to Earthquake Shaking," Journal of the Geotechnical Engineering Division, American Society of Civil Engineers, Vol. 113, No. 8, pp. 861-878.
- "Earthquake Hazards Program, Seismic Design Maps and tools", ASCE 7-10 Standard.
- Department of the Interior, U.S. Geological Survey, Contour Map Showing Minimum Depth to Ground Water, Upper Santa Ana River Valley, California 1973-1979 (Sheet 2 of 2), By Scott E. Carson and Jonathan C. Matti, Dated 1985.
- USGS 2008 National Seismic Hazard Maps Source Parameters
- USGS Unified Hazard Tool

APPENDIX B

Rodriguez Consulting and Engineering

***** LIQUEFACTION ANALYSIS SUMMARY Copyright by CivilTech Software www.civiltechsoftware.com ***** Font: Courier New, Regular, Size 8 is recommended for this report. Licensed to , 5/10/2023 3:10:27 PM Input File Name: UNTITLED Title: PROJECT NAME: Industrial Outdoor Subtitle: Proj No. RCE-Surface Elev.=Existing Ground Hole No.=B-3 Depth of Hole= 50.00 ft Water Table during Earthquake= 175.00 ft Water Table during In-Situ Testing= 175.00 ft Max. Acceleration= 0.5 g Earthquake Magnitude= 6.80 Input Data: Surface Elev.=Existing Ground Hole No.=B-3 Depth of Hole=50.00 ft Water Table during Earthquake= 175.00 ft Water Table during In-Situ Testing= 175.00 ft Max. Acceleration=0.5 g Earthquake Magnitude=6.80 1. SPT or BPT Calculation. 2. Settlement Analysis Method: Ishihara / Yoshimine 3. Fines Correction for Liquefaction: Idriss/Seed 4. Fine Correction for Settlement: During Liquefaction* 5. Settlement Calculation in: All zones* 6. Hammer Energy Ratio, Ce = 0.897. Borehole Diameter, Cb= 1.15 8. Sampling Method, Cs = 19. User request factor of safety (apply to CSR), User= 1 Plot two CSR (fs1=1, fs2=User) 10. Use Curve Smoothing: Yes* * Recommended Options In-Situ Test Data: Depth SPT gamma Fines

ft		pcf	%
0.00	9.00	120.00	28.00
5.00	20.00	120.00	38.00
10.00	20.00	120.00	14.00
15.00	44.00	120.00	14.00
20.00	68.00	120.00	14.00
25.00	100.00	120.00	14.00
30.00	100.00	120.00	14.00
35.00	40.00	120.00	8.00
40.00	100.00	120.00	8.00
45.00	40.00	120.00	8.00
50.00	33.00	120.00	8.00

Output Results:

Settlement of Saturated Sands=0.00 in. Settlement of Unsaturated Sands=0.24 in. Total Settlement of Saturated and Unsaturated Sands=0.24 in. Differential Settlement=0.122 to 0.161 in.

Depth ft	CRRm	CSRfs	F.S.	S_sat. in.	S_dry in.	S_all in.
0.00	0.25	0.32	5.00	0.00	0.24	0.24
5.00	2.57	0.32	5.00	0.00	0.23	0.23
10.00	0.38	0.32	5.00	0.00	0.21	0.21
15.00	2.57	0.31	5.00	0.00	0.19	0.19
20.00	2.57	0.31	5.00	0.00	0.18	0.18
25.00	2.57	0.31	5.00	0.00	0.16	0.16
30.00	2.52	0.30	5.00	0.00	0.15	0.15
35.00	0.45	0.29	5.00	0.00	0.13	0.13
40.00	2.38	0.28	5.00	0.00	0.10	0.10
45.00	0.34	0.26	5.00	0.00	0.08	0.08
50.00	0.24	0.25	5.00	0.00	0.00	0.00
		<u> </u>				

* F.S.<1, Liquefaction Potential Zone
(F.S. is limited to 5, CRR is limited to 2, CSR is limited to 2)</pre>

Units: Depth = ft, Stress or Pressure = atm (tsf), Unit Weight = pcf, Settlement = in.

1 atm (atmosphere) = 1 tsf (ton/ft2) CRRm Cyclic resistance ratio from soils CSRsf Cyclic stress ratio induced by a given earthquake (with user request factor of safety) F.S. Factor of Safety against liquefaction, F.S.=CRRm/CSRsf S_sat Settlement from saturated sands S_dry Settlement from Unsaturated Sands S_allTotal Settlement from Saturated and Unsaturated SandsNoLiqNo-Liquefy Soils