

Livermore Area Recreation and Park District Staff Report

TO: Chair Faltings and Board of Directors

FROM: Mathew Fuzie, General Manager

PREPARED BY: Jeffrey Schneider, Administrative Services Manager
Fred Haldeman, Parks and Facilities Manager

DATE: November 9, 2022

SUBJECT: Pump Track CIP Project – Authorization to Approve Spohn Ranch Agreement

COMMITTEE: Facilities, Finance, and FY22-23 Board Budget Review

RECOMMENDATION: That the Board of Directors authorize the General Manager to sign the attached Price Proposal from Spohn Ranch to construct the Sunken Gardens Bicycle Pump Track and to simultaneously issue a notice to proceed.

BACKGROUND: The Board approved the District's FY22-23 CIP Budget on June 7, 2022. Included in the CIP Budget is \$817,000 of AB1600 funds to complete a Bicycle Pump Track on District-owned property at the Sunken Gardens site. Combined with prior year spending of \$22,201, the total Project budget is \$839,344.

As well, the District's California Environmental Quality Act (CEQA) Notice of Exemption submission (Attachment 3) was endorsed by the Alameda County Clerk on September 20th, and having received no public comment during the requisite 35 day period, staff are prepared to move forward with this project.

Sourcewell: The attached pricing proposal was obtained by LARPD through Sourcewell. LARPD is a member of Sourcewell, whose procurement team takes care of the entire competitive solicitation process. Sourcewell is a service cooperative that was established with the statutory purpose to assist public agencies in meeting specific needs which are more efficiently delivered cooperatively than by an entity individually. Sourcewell is authorized to establish competitively awarded cooperative purchasing contracts on behalf of itself and its participating agencies. Sourcewell follows the competitive contracting law process to solicit, evaluate, and award cooperative purchasing contracts for goods and services. Through Sourcewell, LARPD identified several vendors who could provide the labor, materials, and equipment needed to construct the Pump Track envisioned by the District.


O'Dell Engineering: O'Dell has assisted LARPD in developing design and engineering specifications used by LARPD to identify prospective construction vendors, will create 100% construction documents, and will continue to project manage this effort along with Fred Haldeman, LARPD's Parks and Facilities Manager.

Spohn Ranch: The District selected Spohn Ranch as its preferred vendor based on price, its focus on this specific type of project, and its conceptual design work, which carefully reflected the elements communicated to LARPD through our earlier public outreach sessions. Spohn will provide all labor, materials, and equipment per the 100% Construction Documents.

Engeo: Engeo has completed its geotechnical survey and, in summary, their report concluded "the project site is suitable", "removal of existing fill material is not necessary" and "on-site material is suitable as fill material". Engeo will also be involved special inspections related to concrete/rebar as the project progresses.

Financials: Based on the attached Price Proposal from Spohn Ranch, the District's existing agreement with O'Dell for its design, engineering, and project management services, completed services (Geotech Report) from Engeo, and an assessment by staff and O'Dell regarding the magnitude of any remaining contingency required for this project, staff believes the project can be completed within the District's project budget.

As for the remaining contingency, we've a very current cost estimate from Spohn Ranch (June 28, 2022) and our engineering consultants agree with staff that the likelihood of using what remains in our project budget for contingencies is low.

Vendor	Service(s)	Budget	Current Est
American Ramp Company	Preliminary/conceptual Design (2020)	\$8,194	\$8,194
O'Dell Engineering	design and engg, PM, oversight	\$76,500	\$76,500
Spohn Ranch	Price Proposal	\$655,500	\$713,050
" "	Available Contingency	\$87,751 13% 	\$30,200 4%
Engeo	Geotech Analysis/Report	\$11,400	\$11,400
Project Total		\$839,344	\$839,344
		\$839,344.25	

Of Note:

1. Spohn offers a 12-month materials and workmanship warranty.
2. Project Schedule: once the pricing agreement is signed and a notice to proceed is delivered, the project is preliminarily expected to commence in early 2023 after the completion, by O'Dell, of the project's construction documents. Preliminary estimates are that construction would be completed in the Spring of 2023.
3. On-going maintenance for LARPD is expected to be modest and largely in line with our experience with the nearby skate park (with the possible exception of the artificial turf that will be in place in sections of the structure).

Attachments:

- A. Spohn Ranch – Sourcewell Pricing Proposal
- B. CEQA Filing documentation
- C. Engeo’s Geotech Report

Attachment A - Spohn Ranch Sourcwell Pricing Proposal



SPOHN RANCH, INC.
P 626-330-5803
F 626-330-5503
W SPOHNRANCH.COM
E INFO@SPOHNRANCH
6824 S CENTINELA AVE.
LOS ANGELES, CA 90230

LET'S ROLL.

SOURCEWELL PRICE PROPOSAL

SOURCEWELL CONTRACT #112420-SRI

SOURCEWELL MEMBER #50677

LIVERMORE AREA RECREATION & PARK DISTRICT

SUNKEN GARDENS PUMP TRACK – LIVERMORE, CALIFORNIA

JUNE 28, 2022

SPOHN RANCH TO PROVIDE:

Labor, materials and equipment as follows for the improvements detailed in the 100% Construction Documents and per Spohn Ranch's competitively-solicited Sourcwell Contract #112420-SRI:

SCOPE OF WORK:	SOURCEWELL PRODUCT CODE:	SOURCEWELL PRICE:
MOBILIZATION	SP-1	\$48,000.00
TEMPORARY FACILITIES	SP-2	\$10,000.00
CONSTRUCTION STAKING	SP-14	\$2,500.00
DRAINAGE SYSTEM	SP-8	\$37,800.00
ROUGH GRADING	SP-9	\$24,000.00
FINE GRADING	SP-10	\$22,000.00
CNC-CUT SCREEDS	SS-4	\$4,000.00
CONCRETE PUMP TRACK	PUM-1	\$239,800.00
CONCRETE FLATWORK	CON-4	\$33,950.00
SHOTCRETE	CON-2	\$36,000.00
FREIGHT	FR-2	\$5,000.00
SHADE STRUCTURE (USA SHADE 20' x 20' SINGLE POST CANTILEVER)	SA-3	\$44,000.00
SPECTATOR BENCHES (3)	SA-6	\$6,000.00
SYNTHETIC TURF (FIELD TURF COMMAND CORE)	SP-16	\$159,000.00
LANDSCAPING (COBBLESTONE)	SP-12	\$24,000.00
BONDING	BOND	\$17,000.00
TOTAL NOT-TO-EXCEED SOURCEWELL PRICE INCLUDING PREVAILING WAGE:		\$713,050.00

EXCLUSIONS:

- Bonding
- Permit fees
- 3rd party testing/inspections
- Taxes, except for payroll taxes and sales taxes on materials
- Union labor requirements
- Any work not expressly described in Spohn's scope of work

TERMS & CONDITIONS:

The following terms are expressly part of this proposal and any subsequent agreement between Client and Spohn similarly shall incorporate these terms. In the event that no further contract is entered into, the terms set forth in the proposal shall constitute the entire agreement between the parties.

- Acceptance of the work shall be commercially reasonable and expeditious
- Failure to object to work within a reasonable time shall constitute deemed acceptance
- Spohn shall have approval rights as to any initial project schedule, and all subsequent schedule changes
- Spohn shall accept no risk of loss outside of its direct control
- All discretion attributed to Client in any contract shall be subject to commercial reasonableness standard
- Spohn shall not indemnify Client for losses not proximately and solely caused by Spohn
- Spohn must approve any material increases in scope in writing including agreeing to an equitable adjustment of contract price and time changes in scope in writing
- All modifications, waivers, alterations to be charged against Spohn must be written and signed by Spohn's authorized representative
- Any increase in the price of raw materials anticipated to be used in Spohn's scope greater than ten percent (10%) occurring after execution of this proposal shall constitute a material changed condition necessitating an equitable adjustment to the contract price
- The price contained in this proposal is valid for thirty (30) days and may be accepted by issuance of a notice to proceed or any similar instruction whereby Client indicates desire to commence project. The price is further conditioned upon Client's delivery of all items outside Spohn's scope of work upon which Spohn's work may be predicated.
- Payment terms – 20% upon mobilization, 40% upon 50% completion of scope of work, 35% upon 100% completion of scope of work, 5% within 30 days of completion of scope of work
- Client shall pay invoices upon receipt. Interest on amounts unpaid after thirty days shall accrue at 1% interest of the cumulative outstanding balance per month (12% annual rate), compounded monthly. Client agrees that all work described in an invoice that is not objected to in a writing within five days of receipt of the invoice shall be deemed to be final and binding upon the Parties as to the amounts due, the adequacy of Spohn's performance, and the value of the services provided to Client. Any written objections shall specify the claimed defects sufficiently to allow Spohn's prompt and effective correction.
- Client acknowledges that Spohn is not party to any organized labor agreements. Client agrees that Spohn will not be responsible or liable for any issues, injuries or damages, relating to labor peace, strikes, picketing or otherwise, regardless as to cause. Client agrees that delays related to labor issues shall constitute a contractual delay and entitle Spohn to additional time to perform for the length of the delay, and compensation for any additional costs incurred. These terms are material conditions to Spohn's willingness to provide a proposal to Client.
- In the event that other entities affect the site conditions adversely or impede the progress of the work, the Client shall be responsible for any additional costs
- Any liability of Spohn which relates to the sale, manufacture, delivery, resale, installation or use of any goods sold by or furnished by Spohn, whether arising out of contract, negligence, strict tort, under any warranty or otherwise, shall be limited to Spohn's choice of the following: the repair of the goods; the replacement of the goods; the cancellation of the contract, return of the goods in question to Spohn, and Spohn's refund of the purchase price
- In no event shall Spohn's liability exceed the price of the specific goods upon which the liability is based
- In addition, Spohn shall not, under any circumstances, be responsible for special, consequential, or incidental damages such as, but not limited to, damage to or loss of other property; loss of profit, revenue or reputation; loss of capital; loss of purchased or replaced goods; or claims for delays, back charges, or loss of use
- Spohn reserves the right to makes any corrections as necessary to typographic errors
- In the event of any action, suit, arbitration, or other proceeding of any nature is brought in connection with the payment terms related to these Terms and Conditions, any related agreement, or Spohn's provision of goods, services, products, or to recover any of Spohn's property ("Dispute"), the prevailing party shall be entitled to recover its reasonable attorney's fees, expert-witness fees, other litigation costs and fees (e.g., deposition costs, trial preparation costs, etc.), and other costs and expenses of suit, judgment or award Any Dispute including the determination of the scope or applicability of this agreement to arbitrate, shall be determined by arbitration in Los Angeles, California, before one arbitrator. At the option of the first to commence an arbitration, the arbitration shall be administered either by the American Arbitration Association (AAA) pursuant to its Commercial Rules or by JAMS pursuant to its Comprehensive Arbitration Rules and Procedures. Judgment on the Award may be entered in any court having jurisdiction. This clause shall not preclude parties from seeking provisional remedies in aid of arbitration from a court of appropriate jurisdiction. The arbitrator shall, in the Award, allocate costs, reasonable attorney's fees, expert-witness fees, other litigation fees and expenses including the costs of arbitration to the prevailing party in accordance with the Attorney's Fees provision. Judgment on any arbitration award may be entered by any court of competent jurisdiction.
- Spohn shall, at its expense, procure and maintain insurance with carriers acceptable to Client, and in amounts set forth below. Spohn shall provide certificates of insurance to Client upon request. The certificates of insurance shall provide that there will be no cancellation nor reduction of coverage without thirty (30) days prior written notice to Client. Required coverage amounts:
 - Workers Compensation and Employers Liability insurance in the amount of \$1,000,000;
 - Automobile Coverage for all Owned, Non-Owned and Hired vehicles in the amount of \$1,000,000 per occurrence, \$2,000,000 aggregate;
 - Comprehensive General Liability or Commercial General Liability insurance covering all operations or job specific in the amount of \$1,000,000 per occurrence, \$2,000,000 aggregate;
 - Excess Liability/ Umbrella Insurance in the amount of \$5,000,000;
 - Errors and Omissions/ Professional Liability insurance in the amount of \$2,000,000 per occurrence, \$2,000,000 aggregate.
- Spohn offers a 12-Month Materials and Workmanship Warranty effective upon the date of substantial completion of the project or first use by Client
- These Terms and Conditions are necessarily incorporated by reference into any other related agreement; Client agrees that California law shall govern the relationship between the Client and Spohn to the fullest extent of applicable law including enforcement of any part of these Terms and Conditions or any other related agreement between or among Client and Spohn.
- Each Term and/or Condition herein is severable in the event one or more provisions are unenforceable for any reason



SPOHN RANCH, INC.
P 626-330-5803
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E INFO@SPOHNRANCH
6824 S CENTINELA AVE.
LOS ANGELES, CA 90230

LET'S ROLL.

SOURCEWELL PRICE PROPOSAL

SOURCEWELL CONTRACT #112420-SRI
SOURCEWELL MEMBER #50677
LIVERMORE AREA RECREATION & PARK DISTRICT
SUNKEN GARDENS PUMP TRACK – LIVERMORE, CALIFORNIA

PROPOSAL VALID FOR 30 DAYS FROM JUNE 28, 2022

I AUTHORIZE THE PURCHASE OF THE PRODUCTS AND SERVICES FROM SPOHN RANCH INCLUDED IN THIS PROPOSAL ACCORDING TO THE SPECIFIED TERMS AND CONDITIONS.

SOLD TO: _____

SHIP TO: _____

CONTACT: _____
PHONE: _____
EMAIL: _____

CONTACT: _____
PHONE: _____
EMAIL: _____

SPOHN RANCH REPRESENTATIVE: _____
DATE: _____

PURCHASE AUTHORIZED BY: _____
DATE: _____



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INTERMEDIATE /
ADVANCED TRACK

CURVED WALL RIDE

COBBLESTONE

QUEUING DECK

JUMP LINE

SHADE
STRUCTURE

SPECTATOR
SEATING

DIRECTIONAL
ARROW

BEGINNER TRACK

SYNTHETIC TURF



SUNKEN GARDENS PUMP TRACK LIVERMORE, CALIFORNIA

FINAL CONCEPT DESIGN 6.27.22

ITEM NO. 4.1



DRAINAGE MATERIAL SCHEDULE

SYMBOL	DESCRIPTION	QTY
---	C-01 4" SDR 35 DRAIN LINE	444 LF
■	C-02 CATCH BASIN FOR LANDSCAPE AREAS	9
•	C-03 AREA DRAIN	1

GRADING NOTES

- ALL GRADING SHALL BE IN ACCORDANCE WITH THE LOCAL GRADING CODE AND ANY SPECIAL REQUIREMENTS OF THE GRADING PERMIT.
- CONTRACTOR TO VERIFY GRADES AND NOTIFY OWNER'S CONSTRUCTION ADMINISTRATOR PRIOR TO START OF GRADING WORK.
- SLOPES SHALL BE NO STEEPER THAN 3' HORIZONTAL TO 1' VERTICAL (3:1) AND SHALL HAVE NOT LESS THAN 90% COMPACTION OUT TO THEIR FINISH SURFACES.
- ALL PAVED AREAS SHALL SLOPE AS SHOWN ON PLANS WITH A 2% MAXIMUM FALL. PLANTED AREAS SHALL HAVE A MINIMUM 2% FALL.
- FINISH GRADE SHALL HAVE A UNIFORM SURFACE, FREE OF LUMPS, BUMPS AND DEPRESSIONS AND ANY OBJECTS THAT MAY PREVENT A POSITIVE FLOW TO DRAIN.
- ALL PROPOSED PAVING SURFACES SHALL MEET EXISTING PAVING SURFACES WITH SMOOTH AND CONTINUOUS TRANSITIONS AND FLUSH ALONG ENTIRE EDGE.
- CONCRETE WALKS TO HAVE A MAXIMUM CROSS SLOPE OF 2% AND SHALL MEET ALL CITY AND COUNTY REQUIREMENTS.
- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS, EXISTING DRAINAGE STRUCTURES, PARKING LOT IMPROVEMENTS, AND FINISH FLOOR ELEVATIONS. NOTIFY THE OWNER'S CONSTRUCTION ADMINISTRATOR IMMEDIATELY UPON NOTING ANY DISCREPANCIES.
- FINISH GRADE AT TURF AREAS SHALL BE ONE INCH BELOW FINISH SURFACE OF SIDEWALKS, CURBS OR PAVED AREAS. PLANTING AREA FINISH GRADE SHALL BE 2" BELOW SAME UNLESS OTHERWISE SPECIFIED.
- ALL CONSTRUCTION AREAS SHALL BE FREE OF ROCK, DEBRIS, ETC. ALL EXISTING WEEDS SHALL BE REMOVED.

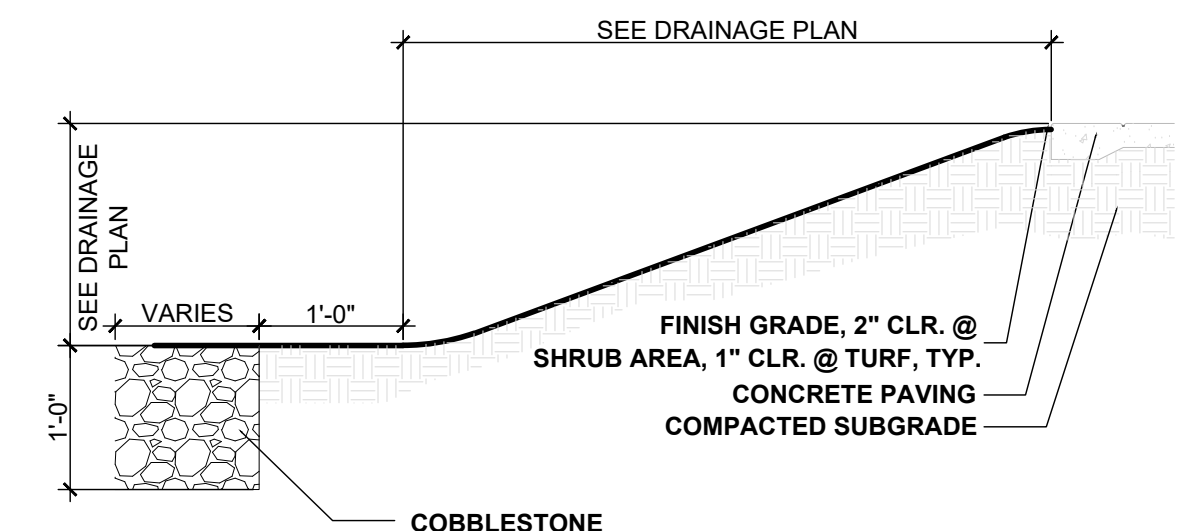
GRADING LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- XXX.XX FS PROPOSED ELEVATIONS
- PROPOSED FLOW DIRECTION

- BS BOTTOM OF STEP
- FG FINISH GRADE
- FS FINISH SURFACE
- HP HIGH POINT
- INV INVERT ELEVATION (MAY CHANGE IN FIELD)
- PA PLANTING AREA
- TD TOP OF DRAIN
- TL TOP OF LEDGE
- TP TOP OF PAD
- TR TOP OF RAIL
- TS TOP OF STEP

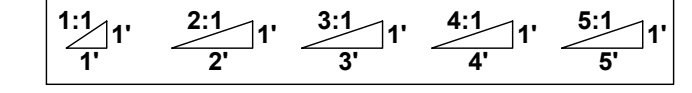
(XXX.X) EXISTING ELEVATION (VERIFY IN FIELD)

****SLOPE AREAS TO BE BLENDED IN FIELD**



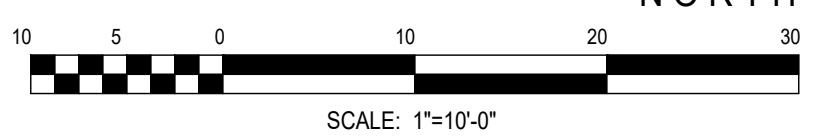
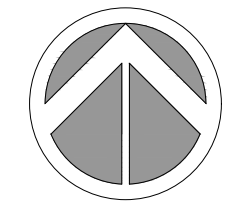
- NOTES
- TYPICAL SLOPE DETAIL FOR INFORMATIONAL PURPOSES ONLY. ALL SLOPE GRADING AND DRAINAGE SHALL CONFORM TO APPROVED GRADING PLAN.

TYPICAL SLOPE FACTORS



1 TYPICAL INTERIOR SLOPE DETAIL

3/4" = 1'-0" P-PIP-LIV-31



SPOHN RANCH SKATE PARKS
 DESIGN. BUILD. COME TOGETHER.
 6824 S. CENTINELA AVE. - LOS ANGELES, CA 90020
 OFFICE (626) 330-5803 - FAX (626) 330-5803

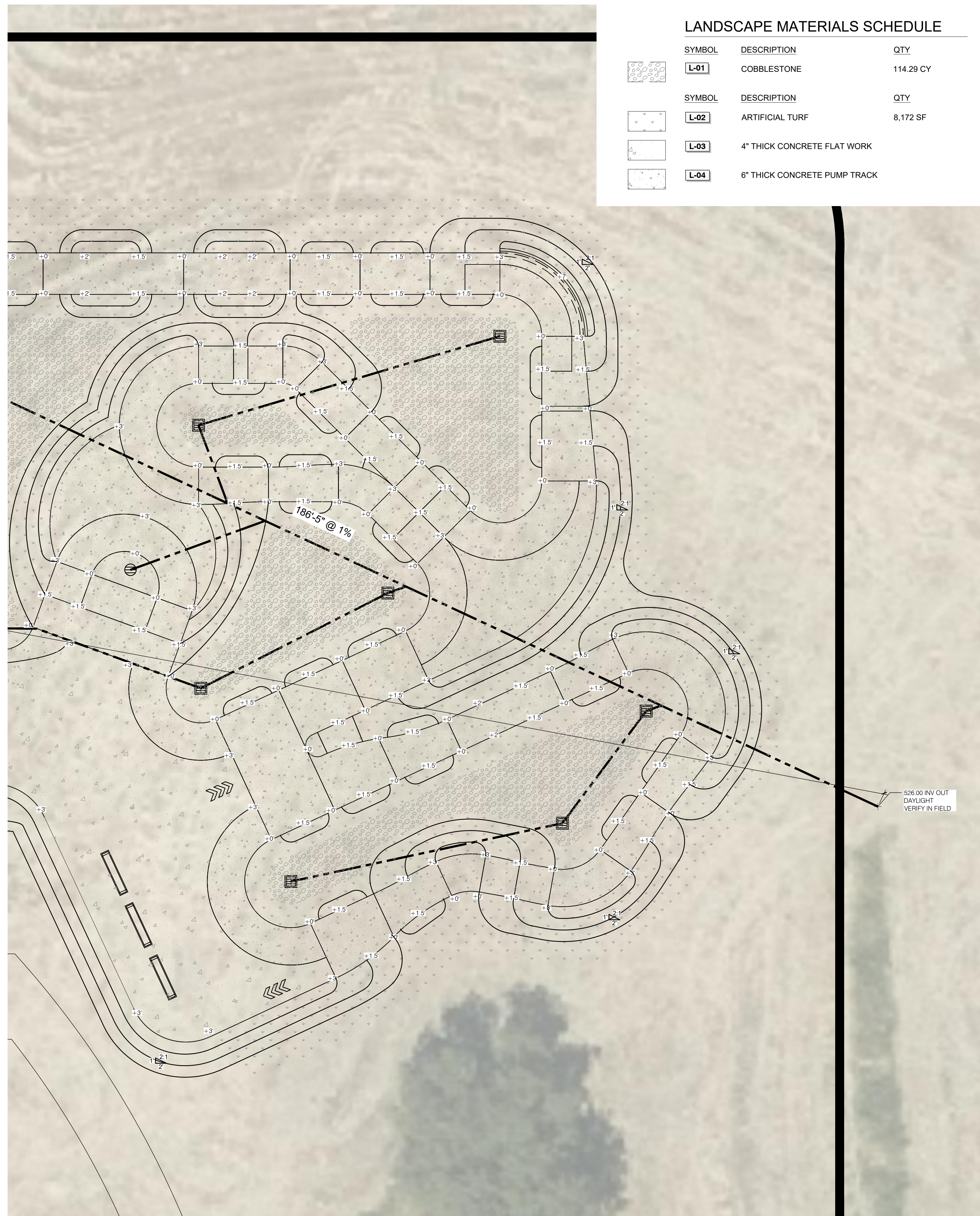
PROJECT TITLE: **LIVERMORE, CA**
 SHEET TITLE: **GRADING + DRAINAGE STUDY**
 SHEET NO: **SKX.1**
 OF XX

NO	DATE	REVISIONS DESCRIPTION
1		
2		
3		
4		
5		

SKATE PARK DESIGNED BY: **VO**
 DOCUMENTS BY: **ZM**
 PLAN CHECKED BY: **XXXXX**
 DATE: **XXXXX**

SKATE PARK DESIGNED BY: **STAMP:**
 VO
 DOCUMENTS BY: **ZM**
 PLAN CHECKED BY: **XXXXX**
 DATE: **XXXXX**

The use of these plans shall be restricted to the original site for which they were prepared, and publication thereof is limited to the project and site identified. Any reuse of these plans or concepts by any method, in whole or part, without express written consent of Spohn Ranch, Inc. is prohibited. Title to these plans and concepts belongs to Spohn Ranch, Inc. without prejudice. Visual contact with or reproduction of these plans or concepts constitute acceptance of these restrictions. Copyright © 2019 Spohn Ranch, Inc.



LANDSCAPE MATERIALS SCHEDULE

SYMBOL	DESCRIPTION	QTY
	L-01 COBBLESTONE	114.29 CY
	L-02 ARTIFICIAL TURF	8,172 SF
	L-03 4" THICK CONCRETE FLAT WORK	
	L-04 6" THICK CONCRETE PUMP TRACK	

GRADING NOTES

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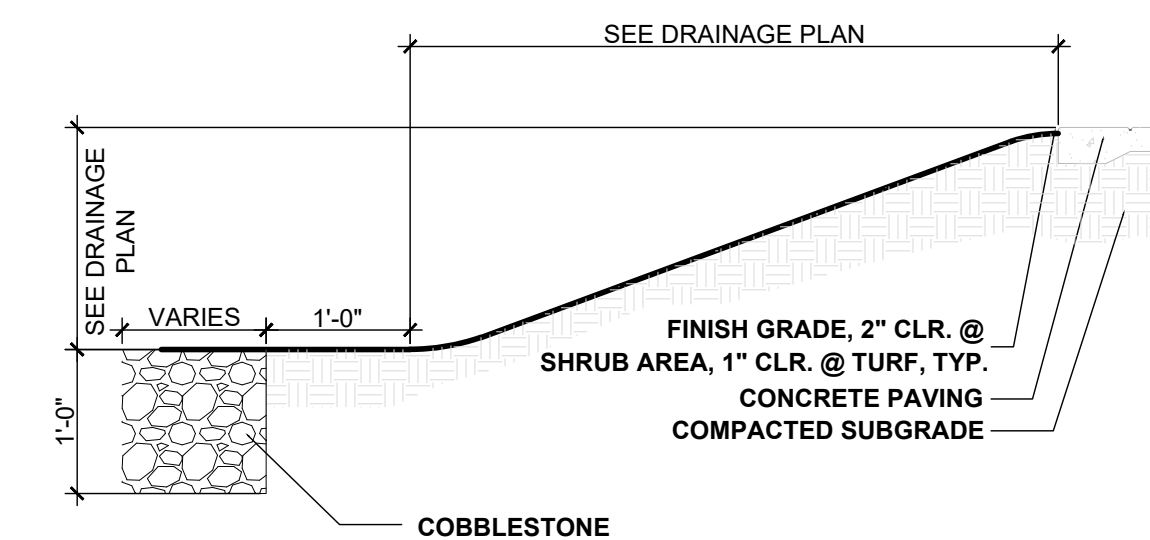
GRADING LEGEND:

- EXISTING CONTOURS
- PROPOSED CONTOURS
- PROPOSED ELEVATIONS
- PROPOSED FLOW DIRECTION

- BS BOTTOM OF STEP
- FG FINISH GRADE
- FS FINISH SURFACE
- HP HIGH POINT
- INV INVERT ELEVATION (MAY CHANGE IN FIELD)
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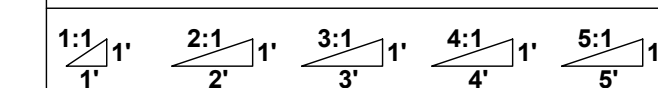
(XXX.X) EXISTING ELEVATION
(VERIFY IN FIELD)

****SLOPE AREAS TO BE BLENDED IN FIELD**



- NOTES
- TYPICAL SLOPE DETAIL FOR INFORMATIONAL PURPOSES ONLY. ALL SLOPE GRADING AND DRAINAGE SHALL CONFORM TO APPROVED GRADING PLAN.

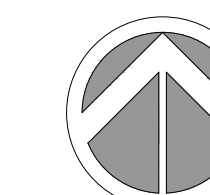
TYPICAL SLOPE FACTORS



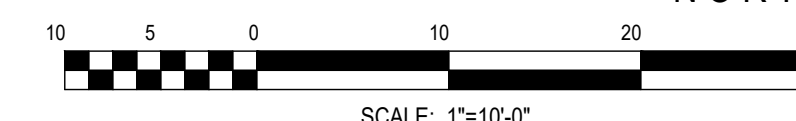
1 TYPICAL INTERIOR SLOPE DETAIL

3/4" = 1'-0"

P-PIP-LIV-31



NORTH



SPOHN RANCH SKATE PARKS

DESIGN. BUILD. COME TOGETHER.
6824 S. CENTINELA AVE. - LOS ANGELES, CA 90020
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SR

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REVISIONS		NO	DATE	DESCRIPTION
BY	DESCRIPTION			

SKATE PARK DESIGNED BY		STAMP:	
VO			
DOCUMENTS BY	ZM		
PLAN CHECKED BY	XXXXX	DATE	XXXXX

PROJECT TITLE
LIVERMORE, CA

SHEET TITLE
GRADING + DRAINAGE STUDY

SHEET

SKX.2

OF XX



State of California - Department of Fish and Wildlife
2022 ENVIRONMENTAL DOCUMENT FILING FEE
CASH RECEIPT
 DFW 753.5a (REV. 01/01/22) Previously DFG 753.5a

AC RECEIPT #: 3327476

RECEIPT NUMBER:
 01-09/20/2022-289
 STATE CLEARINGHOUSE NUMBER (If applicable)

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY LIVERMORE AREA RECREATION & PARK DISTRICT	LEAD AGENCY EMAIL	DATE 09/20/2022
COUNTY/STATE AGENCY OF FILING ALAMEDA	DOCUMENT NUMBER 22 - 289	
PROJECT TITLE SUNKEN GARDENS PUMP TRACK		

PROJECT APPLICANT NAME MICHELLE NEWBOULD	PROJECT APPLICANT EMAIL	PHONE NUMBER (925) 337-5351
PROJECT APPLICANT ADDRESS 4444 EAST AVE.	CITY LIVERMORE	STATE CA
		ZIP CODE 94550

PROJECT APPLICANT (Check appropriate box)

Local Public Agency School District Other Special District State Agency Private Entity

CHECK APPLICABLE FEES:

<input type="checkbox"/> Environmental Impact Report (EIR)	\$3,539.25	\$	0.00
<input type="checkbox"/> Mitigated/Negative Declaration (MND)(ND)	\$2,548.00	\$	0.00
<input type="checkbox"/> Certified Regulatory Program (CRP) document - payment due directly to CDFW	\$1,203.25	\$	0.00
<input checked="" type="checkbox"/> Exempt from fee			
<input checked="" type="checkbox"/> Notice of Exemption (attach)			
<input type="checkbox"/> CDFW No Effect Determination (attach)			
<input type="checkbox"/> Fee previously paid (attach previously issued cash receipt copy)			
<input type="checkbox"/> Water Right Application or Petition Fee (State Water Resources Control Board only)	\$850.00	\$	0.00
<input checked="" type="checkbox"/> County documentary handling fee		\$	50.00
<input type="checkbox"/> Other		\$	

PAYMENT METHOD:

Cash Credit Check Other

TOTAL RECEIVED \$ 50.00

SIGNATURE 	AGENCY OF FILING PRINTED NAME AND TITLE T. CLAFTON, DEPUTY CLERK	ITEM NO. 4.1
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Attachment B - CEQA Filing

***ENVIRONMENTAL DECLARATION**

(CALIFORNIA FISH AND GAME CODE SECTION 711.4)

LEAD AGENCY NAME AND ADDRESS

Livermore Area Recreation &
Park District
4444 East. Ave.
Livermore, CA 94550

FOR COUNTY CLERK USE ONLY

ENDORSED
ALAMEDA COUNTY

SEP 20 2022

MELISSA WILK County Clerk
By _____ Deputy

FILE NO:

22-289

CLASSIFICATION OF ENVIRONMENTAL DOCUMENT:

(PLEASE MARK ONLY ONE CLASSIFICATION)

1. NOTICE OF EXEMPTION / STATEMENT OF EXEMPTION

A - STATUTORILY OR CATEGORICALLY EXEMPT

\$ 50.00 - COUNTY CLERK HANDLING FEE

2. NOTICE OF DETERMINATION (NOD)

A - NEGATIVE DECLARATION (OR MITIGATED NEG. DEC.)

\$ 2,548.00 - STATE FILING FEE

\$ 50.00 - COUNTY CLERK HANDLING FEE

B - ENVIRONMENTAL IMPACT REPORT (EIR)

\$ 3,539.25 - STATE FILING FEE

\$ 50.00 - COUNTY CLERK HANDLING FEE

3. OTHER: _____

A COPY OF THIS FORM MUST BE COMPLETED AND SUBMITTED WITH EACH COPY OF AN ENVIRONMENTAL DECLARATION BEING FILED WITH THE ALAMEDA COUNTY CLERK.

BY MAIL FILINGS:

PLEASE INCLUDE FIVE (5) COPIES OF ALL NECESSARY DOCUMENTS AND TWO (2) SELF-ADDRESSED ENVELOPES.

IN PERSON FILINGS:

PLEASE INCLUDE FIVE (5) COPIES OF ALL NECESSARY DOCUMENTS AND ONE (1) SELF-ADDRESSED ENVELOPES.

ALL APPLICABLE FEES MUST BE PAID AT THE TIME OF FILING.

FEES ARE EFFECTIVE JANUARY 1, 2022

MAKE CHECKS PAYABLE TO: ALAMEDA COUNTY CLERK

NOTICE OF EXEMPTION

TO: Alameda County Clerk – Recorder’s Office
1106 Madison St. – First Floor
Oakland, CA 94607

FROM: Livermore Area Recreation and Park District
4444 East Ave.
Livermore, CA 94550

**ENDORSED
FILED
ALAMEDA COUNTY**

SEP 20 2022

Project Title: Sunken Gardens Pump Track
Project Location: 3800 Pacific Ave. Livermore, CA 94550

By MELISSA WILK, County Clerk Deputy

Description of Nature, Purpose and Beneficiaries of Project: The proposed project, Sunken Gardens Pump Track, includes the construction of a bicycle pump track for recreational use by the residents of Livermore and the surrounding communities. This project is located on LARPD-owned land (APN 98-A-400-3-13) adjacent to an existing bicycle/skate park.

Name of Public Agency Approving Project: Livermore Area Recreation and Park District (LARPD)

Name of Agency Carrying Out Project: Livermore Area Recreation and Park District (LARPD)

EXEMPT STATUS:

- Categorical Exemption. Section 15332 In-Fill Development Projects
- Declared Emergency (Sec. 15269(a); 21080(b)(3))
- Emergency Project (Sec. 15269(b)(c); 21080(b)(4))
- Ministerial (Sec. 15268; 21080(b)(1))
- Statutory Exemption. State section number:
- "Common Sense" Exemption (Sec. 1506(b)(3)) The possible environmental impacts of the project have been considered in making this determination, as explained below.

Reasons why project is exempt: This project is Categorically Exempt under CEQA Section 15332 In-Fill Development Projects, which exempts projects consisting of the applicable general plan designation, all applicable general plan policies, and appropriate zoning designation and regulations. Additionally, the proposed development occurs within city limits on a project site of no more than five acres surrounded by urban uses. The project site has no value as a habitat for endangered, rare, or threatened species. Approval of the project would not result in any significant effects relating to traffic, noise, air, or water quality. Lastly, the site can be adequately served by all required utilities and public services.

Lead Agency

Contact Person: Michelle Newbould **Telephone:** (925) 337-5351

Signature: Michelle Newbould

Name & Title: MICHELLE NEWBOULD - ADMINISTRATIVE ASSISTANT

***ENVIRONMENTAL DECLARATION**

(CALIFORNIA FISH AND GAME CODE SECTION 711.4)

FILED
ALAMEDA COUNTY

JUL 22 2016

LEAD AGENCY NAME AND ADDRESS

Livermore Area
Recreation & Park District
An independent special district
4444 East Ave., Livermore, CA 94550-5053
(925) 373-5700 • www.larpd.org

FOR COUNTY CLERK USE ONLY

By STEVE MANNING, County Clerk Deputy

16-308

FILE NO: _____

CLASSIFICATION OF ENVIRONMENTAL DOCUMENT:

(PLEASE MARK ONLY ONE CLASSIFICATION)

1. NOTICE OF EXEMPTION / STATEMENT OF EXEMPTION

A - STATUTORILY OR CATEGORICALLY EXEMPT

\$ 50.00 - COUNTY CLERK HANDLING FEE

2. NOTICE OF DETERMINATION (NOD)

A - NEGATIVE DECLARATION (OR MITIGATED NEG. DEC.)

\$ 2,210.25 - STATE FILING FEE

\$ 50.00 - COUNTY CLERK HANDLING FEE

B - ENVIRONMENTAL IMPACT REPORT (EIR)

\$ 3,070.00 - STATE FILING FEE

\$ 50.00 - COUNTY CLERK HANDLING FEE

***A COPY OF THIS FORM MUST BE COMPLETED AND SUBMITTED WITH EACH COPY OF AN ENVIRONMENTAL DECLARATION BEING FILED WITH THE ALAMEDA COUNTY CLERK.**

FOUR (4) COPIES OF ALL NECESSARY DOCUMENTS ARE REQUIRED FOR FILINGS SUBMITTED BY MAIL. FIVE (5) COPIES ARE REQUIRED FOR IN-OFFICE FILINGS.

ALL APPLICABLE FEES MUST BE PAID AT THE TIME OF FILING.

FEES ARE EFFECTIVE JANUARY 1, 2016

MAKE CHECKS PAYABLE TO: ALAMEDA COUNTY CLERK

Received

AUG 26 2016

LARPD

ITEM NO. 4.1

Notice of Determination

Appendix D

To:
Office of Planning and Research
U.S. Mail: P.O. Box 3044
Street Address: 1400 Tenth St., Rm 113
Sacramento, CA 95812-3044 Sacramento, CA 95814

County Clerk
County of: Alameda
Address: 1106 Madison Street
Oakland, CA 94607

From:
Public Agency: LARPD
Address: 44 East Avenue
Livermore, CA 94550

Contact: Tim Barry, General Manager
Phone: 925/373-5700

Lead Agency (if different from above):
Address:

Contact: STEVE MANNING, County Clerk
Phone: By [Signature] Deputy

FILED
ALAMEDA COUNTY
JUL 22 2016

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2016021038

Project Title: Livermore Area Recreation and Park District Parks, Recreation and Trails Draft Master Plan

Project Applicant: Livermore Area Recreation and Park District

Project Location (include county): Livermore Valley, including the City of Livermore and eastern Alameda County

Project Description:

The proposed project is a comprehensive update of the District's Parks, Recreation, and Trails Master Plan, intended to serve as a guide to the development, enhancement and management of parks, trails, recreation facilities, open space, and programs within the District's jurisdiction. The Draft Master Plan provides a broad range of goals, policies, and recommended actions for the District, including providing new facilities to meet existing and future demand, increasing trail connectivity, emphasizing opportunities for synthetic turf, and encouraging more on-site recreational development.

This is to advise that the Livermore Area Recreation and Park District has approved the above (X) Lead Agency or () Responsible Agency

described project on June 29, 2016 and has made the following determinations regarding the above described project.

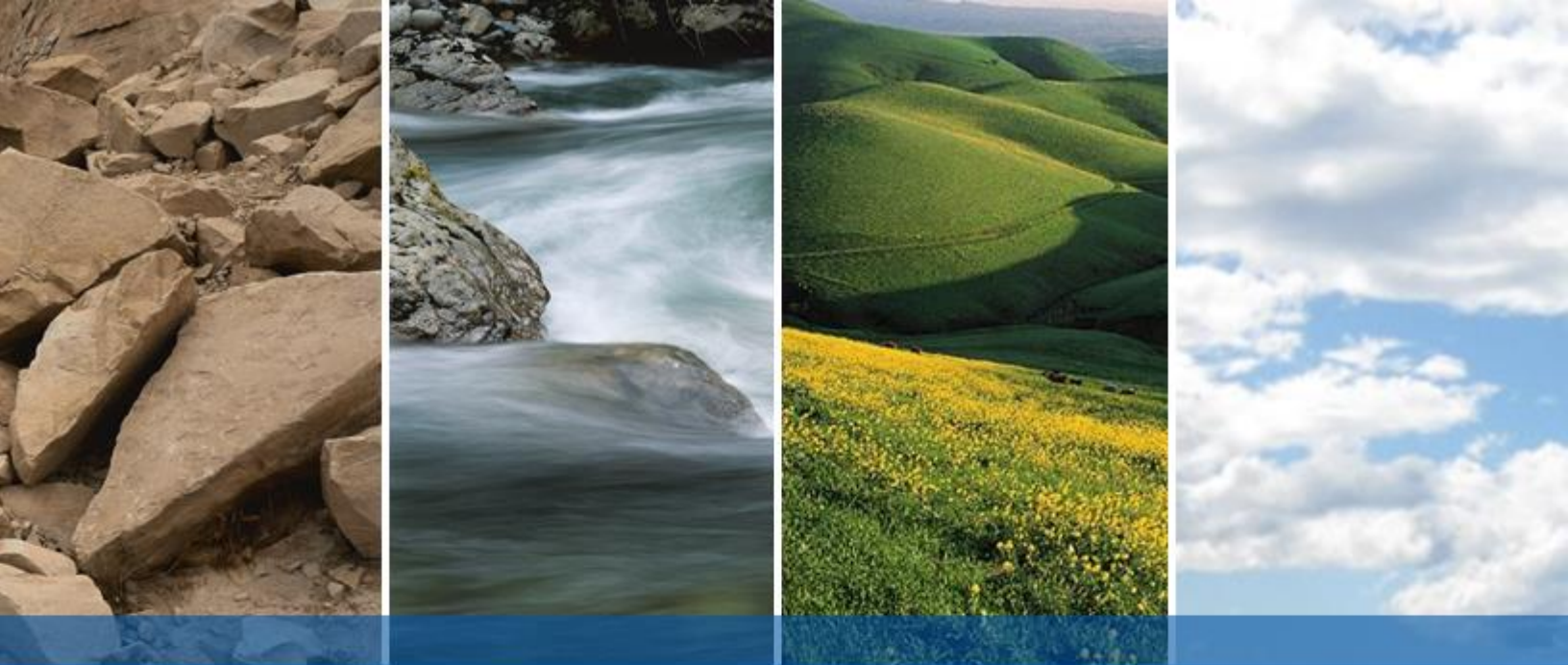
- 1. The project [] will [X] will not have a significant effect on the environment.
2. [] An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA. [X] A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [X] were [] were not made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [X] was [] was not adopted for this project.
5. A statement of Overriding Considerations [] was [X] was not adopted for this project.
6. Findings [] were [X] were not made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at: 444 East Avenue, Livermore, CA 94550

Signature (Public Agency): [Signature] Title: General Manager

Date: 7-5-16 Date Received for filing at OPR:

CLERK'S CERTIFICATE OF POSTING. Pub. Res. 21152: I certify that a copy of this document was posted at the Recorder's Office, Oakland, CA, for the period prescribed by law. Executed at Oakland, CA Date: 6/23/16 By: [Signature] Deputy COUNTY CLERK



Attachment C - Geotech Report

SUNKEN GARDENS PUMP TRACK LIVERMORE, CALIFORNIA

GEOTECHNICAL EXPLORATION

SUBMITTED TO
Ms. Michelle Newbould
Livermore Area Recreation & Park District
4444 East Avenue
Livermore, CA 94550

PREPARED BY
ENGEO Incorporated

June 3, 2022

PROJECT NO.
20347.000.001

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ENGEO
— Expect Excellence —
ITEM NO. 4.1

Project No.
20347.000.001

June 3, 2022

Ms. Michelle Newbould
Livermore Area Recreation & Park District
4444 East Avenue
Livermore, CA 94550

Subject: Sunken Gardens Pump Track
3800 Pacific Avenue
Livermore, California

GEOTECHNICAL EXPLORATION

Dear Ms. Newbould:

With your authorization, we completed this geotechnical exploration report for the proposed development located in Livermore, California. The accompanying geotechnical exploration report compiles our field exploration together with our conclusions and recommendations regarding development within the study area.

We believe that the project site is suitable for the proposed development provided the recommendations of this report are incorporated into the project design and implemented during construction.

We are pleased to have been of service to you on this project and will continue to consult with you and your design team as the project planning progresses. If you have any questions regarding the information included in the report, please do not hesitate to contact us.

Sincerely,

ENGEO Incorporated



Connor Dunn

cd/sh/jf



Steve Harris, GE



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APPENDIX B – Laboratory Test Data

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

We prepared this geotechnical exploration report for design of the planned pump track in Livermore, California. The purpose of this geotechnical exploration report is to provide conclusions and recommendations regarding site development and concrete slab-on-grade recommendations for the proposed development. The scope of our services included a review of available literature and geologic maps for the immediate area, field exploration including four test pits and a double ring infiltration test, laboratory testing, geotechnical data analysis, and report preparation summarizing our recommendations for site development.

In preparation of this report, we reviewed the Sunken Garden Pump Track Landscape Improvement Plans by O'Dell Engineering dated September 22, 2021. We also reviewed the Revised Pump Track Location Exhibit, dated May 4, 2022.

We prepared this report exclusively for Livermore Area Recreation & Park District and their design team consultants. We should review any changes made in the character, design, or layout of the development to modify the conclusions and recommendations contained in this report, as necessary. This document may not be reproduced in whole or in part by any means whatsoever, nor may it be quoted or excerpted without our express written consent.

1.2 PROJECT LOCATION AND DESCRIPTION

Figure 1 displays a Site Vicinity Map. The proposed pump track will be located northeast of the existing Sunken Gardens Skate Park at 3800 Pacific Avenue. The property currently consists of vacant land. Figure 2 shows the site boundaries and our exploration locations.

We understand the proposed improvements will include construction of a reinforced concrete skateboard pump track bearing on compacted soil, a shade structure, benches, landscape areas, and a subsurface drainage system daylighting at the low point of the site, approximately 34 feet from the pump track. Structural loads are yet to be determined; however, we assume that structural loads will be representative for this type of construction.

2.0 FINDINGS

2.1 SITE BACKGROUND AND EXISTING IMPROVEMENTS

We understand that the site was previously used as a quarry resulting in the placement of non-engineered fill in the vicinity of the proposed pump track. Based on a review of available historical aerial photos, there appear to be possible quarry related activities from as early as 1949 until approximately 1970.

2.2 GEOLOGY

Wagner, et al. (1991) mapped the surficial native soil of the subject site as Alluvium Deposits (Q – Figure 3). This soil is described as Quaternary-aged deposits that consist predominantly of loose clay, silt, sand, or gravel that has been deposited by running water.

2.3 SEISMICITY

The site is located in a seismically active region. The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone and no known surface expressions of active faults are believed to exist within the site. An active fault is defined by the State Mining and Geology Board (California Geological Survey, 2007) as one that has had surface displacement within Holocene time (about the last 11,000 years). According to the 2008 National Seismic Hazard Maps Spatial Query, the two nearest earthquake faults from the center of the site designated as active seismic sources are the Greenville Connected Fault, located approximately 4 miles west, and the Mount Diablo Thrust Fault, located approximately 6 miles west. Other active seismic sources in the region are summarized in the table below. Figure 4 shows the approximate locations of these faults and significant historic earthquake epicenters recorded within the region.

TABLE 2.3-1: Active Faults Capable of Producing Significant Ground Shaking at the Site
Latitude: 37.6760097, Longitude: -121.750762

FAULT NAME	DISTANCE FROM SITE (MILES)	DIRECTION FROM SITE	MAXIMUM MOMENT MAGNITUDE
Greenville Connected	4.1	West	7.0
Mount Diablo Thrust	5.5	West	6.7
Calaveras	8.7	West	7.0
Great Valley	13.0	Southwest	6.9
Hayward-Rodgers Creek	14.0	West	7.3

Portions of the Great Valley fault are considered seismically active blind thrust faults; however, since the fault segments are not known to extend to the ground surface, the fault is not defined as active by the State Mining and Geology Board according to the definition above and the State of California has not defined Earthquake Fault Zones around postulated traces.

The Great Valley fault is considered capable of causing significant ground shaking at the site, but the recurrence interval is believed longer than for more distant, strike-slip faults. Recent studies suggest that this boundary fault may have been the cause of the Vacaville-Winters earthquake sequence of April 1892 (Eaton, 1986; Wong and Biggar, 1989; Moores and others, 1991). Other large (>M_w7) earthquakes have historically occurred in the Bay Area to the west and along the margins of the Central Valley and many earthquakes of low magnitude occur every year.

2.4 FIELD EXPLORATION

Our field exploration included excavating four test pits and performing one double ring infiltration test at the locations shown on the Site Plan, Figure 2. We performed our field exploration on May 12, 2022. The location and elevations of our explorations are approximate and were estimated by using mobile GPS and GIS applications on handheld devices; they should be considered accurate only to the degree implied by the method used.

We observed excavation of four test pits at the locations shown on the Site Plan, Figure 2. An ENGEO representative observed the test pit excavation and logged the subsurface conditions at each location. We retained a rubber-tired backhoe to excavate the test pits and logged the underlying soil. The maximum depth penetrated by the test pits was approximately 10 feet below existing ground surface.

We obtained soil samples from the test pits using hand-sampling techniques. The test pit logs present descriptions and graphically depict the subsurface conditions encountered. The logs depict subsurface conditions at the exploration locations during the exploration; however, subsurface conditions may vary with time. The exploration logs are included in Appendix A.

2.5 SURFACE CONDITIONS

We observed the following site features during our field exploration.

- The site primarily consisted of a vacant tilled field.
- Several large trees were located throughout the site.
- Arroyo Bike Trail bordered the Site to the west.

Please refer to the Site Plan, Figure 2, for more information on site features.

2.6 SUBSURFACE CONDITIONS

The soil encountered in our explorations generally consisted of undocumented fill consisting primarily of clayey gravel to the maximum depth explored of approximately 10 feet below existing ground surface. The near-surface soil generally consists of moderately expansive sandy clay.

Consult the Site Plan and exploration logs for specific subsurface conditions at each location. We include our exploration logs in Appendix A. The profiles graphically depict the subsurface conditions encountered at the time of the exploration.

2.7 GROUNDWATER CONDITIONS

Static or perched groundwater was not encountered in any of our subsurface explorations. We searched United States Geological Survey (USGS) and California Department of Water Resource (DWR) monitored wells in the vicinity of the project area. Groundwater appears to be between 25 and 45 feet deep in the surrounding site area. Fluctuations in the level of groundwater may occur due to variations in rainfall, irrigation practice, and other factors not evident at the time measurements were made.

2.8 INFILTRATION TESTING

We excavated one additional test pit on May 12, 2022, utilizing a rubber-tired backhoe at the approximate location shown on the Site Plan, Figure 2 within the vicinity of the proposed subdrain outfall to a depth of approximately 3 feet below the existing ground surface. The test pit was converted into a double-ring infiltration test to test the infiltration rate within representative soil strata. The double-ring infiltration test was performed in general conformance with ASTM D3385 and the Multi-Agency Post-Construction Stormwater Standards Manual.

The infiltration test maintains a constant head within the rings. Specialized Mariotte Tubes were used to maintain the water levels at the selected head elevation in both the inner ring and the annular space throughout the test. The infiltration test was run until the infiltration rate stabilized.

The infiltration rate for the double-ring infiltrometer was calculated using the following equation from ASTM D3385.

$$VIR = \Delta VIR / (AIR * \Delta t)$$

Where:

- VIR = inner ring incremental infiltration velocity, cm/hr
- ΔVIR = volume of liquid used during time interval to maintain constant head in the inner ring, cm³
- AIR = interior area of inner ring, cm²
- Δt = time interval, h

Based on the encountered soil types, the site soil would be anticipated to have infiltration rates for Type D soil, as presented in Table 3-1 of the Multi-Agency Post Construction Stormwater Standards Manual. Our double ring infiltration test results are summarized in Table 2.8-1 below along with estimations of soil type at each test location.

TABLE 2.8-1: Double-Ring Infiltrometer Test Results

TEST LOCATION	SOIL TYPE	INFILTRATION RATE (inches/hour)
DR-1	Clayey Gravel (GC)	0.05

2.9 LABORATORY TESTING

We performed laboratory tests on selected soil samples from our test pits to evaluate their engineering properties. For this project, we performed sieve and plasticity index testing. Laboratory test results are included in Appendix B.

3.0 CONCLUSIONS

Based on the results of our exploration and analysis, it is our opinion that construction at the site is feasible from a geotechnical standpoint. It is our opinion that the geotechnical concerns may be mitigated if our recommendations are incorporated in the design of the project and implemented during construction. The primary geotechnical consideration that could affect development on the site is the presence of moderately expansive surficial soil and undocumented fill.

3.1 EXISTING FILL

We encountered undocumented fill in each of our test pits to the maximum depth explored of 10 feet below existing ground surface. Due to equipment limitations and safety concerns, we were unable to excavate any deeper to find native material. The gravelly fill was relatively dense and the excavator was having difficulty removing material at depth.

Fill is considered “undocumented” if there are no records regarding the placement and compaction for use as engineered fill. Without proper documentation, we cannot determine if these fills were properly engineered to meet the needs of the proposed improvements. Non-engineered fills can undergo excessive settlement, especially under new fill or building loads. We would typically recommend removal and replacement of the undocumented fill material. However, given the depth of the fill, the assumed light loading of the proposed pump track, and

the density of the encountered fill materials, it is our opinion that removal of the existing fill material is not necessary. Recommendations for concrete slabs-on-grade constructed on fill material are provided in Section 7.

3.2 EXPANSIVE SOIL

We observed potentially expansive lean clay near the surface of the site in our borings. Our laboratory testing indicates that the soil exhibits moderate shrink/swell potential with variations in moisture content.

Expansive soil changes in volume with changes in moisture. It can shrink or swell and cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. To reduce the potential for damage to the proposed pump track, we recommend that the slabs-on-grade be underlain by a minimum of 4 inches of Class 2 aggregate base.

We also provide specific grading recommendations for compaction of expansive soil at the site. The purpose of these recommendations is to reduce the swell potential of the soil by compacting at a higher moisture content and controlling the amount of compaction. Expansive soil mitigation recommendations are presented in Section 5 of this report.

3.3 SEISMIC HAZARDS

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary seismic hazard is ground rupture, also called surface faulting. The common secondary seismic hazards include ground shaking, liquefaction, and ground lurching. The following sections present a discussion of these hazards as they apply to the site. Based on topographic and lithologic data, the risk of regional subsidence or uplift is considered low to negligible at the site.

3.3.1 Ground Rupture

Since there are no known active faults crossing the property and the site is not located within an Earthquake Fault Special Study Zone, it is our opinion that ground rupture is unlikely at the subject property.

3.3.2 Ground Shaking

An earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the site, similar to that which has occurred in the past. To mitigate the shaking effects, all structures should be designed using sound engineering judgment and the current California Building Code (CBC) requirements, as a minimum. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures should be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Conformance to the current building code recommendations does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however,

it is reasonable to expect that a well-designed and well-constructed structure will not collapse or cause loss of life in a major earthquake (SEAOC, 1996).

3.3.3 Liquefaction

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soil most susceptible to liquefaction is clean, loose, saturated, uniformly graded fine sand below the groundwater table. Empirical evidence indicates that loose silty sand is also potentially liquefiable. When seismic ground shaking occurs, the soil is subjected to cyclic shear stresses that can cause excess hydrostatic pressures to develop. If excess hydrostatic pressures exceed the effective confining stress from the overlying soil, the sand may undergo deformation. If the sand undergoes virtually unlimited deformation without developing significant resistance, it is said to have liquefied, and if the sand consolidates or vents to the surface during and following liquefaction, ground settlement and surface deformation may occur. In some cases, settlements of approximately 2 to 3 percent of the thickness of the liquefiable layer have been measured.

Based on the relatively deep groundwater levels discussed in Section 2.7, it is our opinion that liquefaction-induced settlements will not be significant. However, there may be deeper sand layers present below the groundwater table that may contribute minor differential settlement.

3.4 FLOODING

Based on review of the FEMA flood zone map, the subject development is designated as Flood Zone X. This signifies an area of minimal flood zone hazard. The Civil Engineer should review pertinent information relating to possible flood levels for the subject site based on final pad elevations and provide appropriate design measures for development of the project, if necessary.

3.5 2019 CBC SEISMIC DESIGN PARAMETERS

The 2019 CBC utilizes seismic design criteria established in the ASCE/SEI Standard "Minimum Design Loads and Associated Criteria for Buildings and Other Structures," (ASCE 7-16). Based on the subsurface conditions encountered, we characterized the site as Site Class D.

ASCE 7-16 requires a site-specific ground-motion hazard analysis for Site Class D sites with a mapped S_1 value greater than or equal to 0.2. However, Section 11.4.8 of ASCE 7-16 and Supplement No. 3 provide an exception to this requirement. A site-specific ground-motion hazard analysis is not required where the value of the parameter S_{M1} determined by Equation 11.4-2 and shown in Table 1 is increased by 50 percent for developing the mapped Risk-Targeted Maximum Considered Earthquake (MCE_R) spectral response, calculating S_{D1} , and evaluating C_s in accordance with Chapter 12 of ASCE 7-16.

In Table 3.5-1 below, we provide the CBC seismic parameters based on the United States Geological Survey's (USGS') Seismic Design Maps for your use. When using this table, considerations should be given to exceptions in Section 11.4.8 of ASCE 7-16, as described in this report.

TABLE 3.5-1: 2019 CBC Seismic Design Parameters, Latitude: 37.6760097, Longitude: -121.750762

PARAMETER	VALUE
Site Class	D
Mapped MCE_R Spectral Response Acceleration at Short Periods, S_S (g)	1.86
Mapped MCE_R Spectral Response Acceleration at 1-second Period, S_1 (g)	0.6
Site Coefficient, F_A	1
Site Coefficient, F_V	1.7*
MCE_R Spectral Response Acceleration at Short Periods, S_{MS} (g)	1.86
MCE_R Spectral Response Acceleration at 1-second Period, S_{M1} (g)	1.02*
Design Spectral Response Acceleration at Short Periods, S_{DS} (g)	1.24
Design Spectral Response Acceleration at 1-second Period, S_{D1} (g)	0.68*
Mapped MCE Geometric Mean (MCE_G) Peak Ground Acceleration, PGA (g)	0.76
Site Coefficient, F_{PGA}	1.1
MCE_G Peak Ground Acceleration adjusted for Site Class effects, PGA_M (g)	0.84
Long period transition-period, T_L (sec)	8

*The parameters above should only be used for calculation of T_s , determination of Seismic Design Category, and, when taking the exceptions under Items 1 and 2 of ASCE 7-16 Section 11.4.8. (Supplement Number 3 <https://ascelibrary.org/doi/epdf/10.1061/9780784414248.sup3>).

We recommend that we collaborate with the structural engineer of record to further evaluate the effects of taking the exception on the structural design and identify the need for performing a site-specific ground-motion hazard analysis. We can prepare a proposal for a site-specific ground-motion hazard analysis, if requested.

4.0 CONSTRUCTION MONITORING

Our experience and that of our profession clearly indicate that the risk of costly design, construction, and maintenance problems can be significantly lowered by retaining the design geotechnical engineering firm to:

1. Review the project plans and specifications prior to construction to determine whether our recommendations have been implemented, and to provide additional or modified recommendations, if necessary. This also allows us to check if any changes have occurred in the nature, design, or location of the proposed improvements and provides the opportunity to prepare a written response with updated recommendations.
2. Perform construction monitoring to check the validity of the assumptions we made to prepare this report. All earthwork operations should be performed under the observation of our representative to check that the site is properly prepared, the selected fill materials are satisfactory, and that placement and compaction of the fill has been performed in accordance with our recommendations and the project specifications. Sufficient notification to us prior to earthwork is essential.

If we are not retained to perform the services described above, then we are not responsible for any party's interpretation of our report (and subsequent addenda, letters, and verbal discussions).

5.0 EARTHWORK RECOMMENDATIONS

The relative compaction and optimum moisture content of soil and aggregate base referred to in this report are based on the most recent ASTM D1557 test method. Compacted soil is not acceptable if it is unstable. It should exhibit only minimal flexing or pumping, as determined by an ENGEО representative.

As used in this report, the term “moisture condition” refers to adjusting the moisture content of the soil by either drying if too wet or adding water if too dry.

We define “structural areas” in Section 5 of this report as any area sensitive to settlement of compacted soil. These areas include, but are not limited to the pump track, sidewalks, pavement areas, and retaining walls.

5.1 DEMOLITION AND STRIPPING

Areas to be developed should be cleared of all surface and subsurface deleterious materials, including vegetation, designated trees, buried utility lines, buried irrigation lines and debris. Excavations extending below the planned finished site grades should be cleaned and backfilled with suitable material compacted to the recommendations presented in Section 5.5. ENGEО should be retained to observe and test all backfilling.

The surface vegetation should be cut as close to the surface as possible and removed from the site. The remaining vegetation should be thoroughly disked or mulched into the upper 12 inches of the site soil until ENGEО determines that the soil is adequately mixed. If desired, ENGEО can evaluate site vegetation at the time of grading to determine the feasibility of mulching organics in place.

5.2 OVER-OPTIMUM SOIL MOISTURE CONDITIONS

The contractor should anticipate encountering excessively over-optimum (wet) soil moisture conditions during winter or spring grading, or during or following periods of rain. Wet soil can make proper compaction difficult or impossible.

Wet soil conditions can be mitigated by:

1. Frequent spreading and mixing during warm dry weather,
2. Mixing with drier materials,
3. Mixing with a lime or cement product, or
4. Stabilizing with aggregate or geotextile stabilization fabric, or both.

We should evaluate Options 3 and 4 for approval prior to implementation.

5.3 ACCEPTABLE FILL

On-site material is suitable as fill material provided it is processed to remove concentrations of organic material, debris, and particles greater than 8 inches in maximum dimension.

Imported fill materials should meet the above requirements and have a plasticity index less than the on-site material. Allow us to sample and test proposed imported fill materials at least 5 days prior to delivery to the site.

5.4 ENGINEERED FILL COMPACTION

5.4.1 Grading in Structural Areas

Subgrade compaction should be performed prior to fill placement, following cutting operations, and in areas left at grade as follows.

1. Scarify to a depth of at least 12 inches.
2. Moisture condition soil to at least 3 percentage points above the optimum moisture content.
3. Compact the subgrade to at least 90 percent relative compaction. Compact the upper 6 inches of finish pavement subgrade to at least 95 percent relative compaction prior to aggregate base placement.

After the subgrade soil has been compacted, the contractor should place and compact acceptable fill as follows.

1. Spread fill in loose lifts that do not exceed 12 inches or the compaction equipment penetration depth, whichever is less.
2. Moisture condition lifts to at least 3 percentage points above the optimum moisture content.
3. Compact fill to a minimum of 90 percent relative compaction; Compact the upper 6 inches of fill in pavement areas to 95 percent relative compaction prior to aggregate base placement.

The contractor should compact the pavement Caltrans Class 2 aggregate base section to at least 95 percent relative compaction (ASTM D1557) at a moisture content at or slightly above the optimum moisture content.

5.4.2 Underground Utility Backfill

Place and compact trench backfill as follows.

- Trench backfill should have a maximum particle size of 6 inches.
- Moisture condition material outside the trench to at least 3 percentage points above the optimum moisture content.
- Place fill in loose lifts not exceeding 12 inches.
- Compact fill to a minimum of 90 percent for native or imported soil and 95 percent for aggregate base (ASTM D1557).

The contractor is responsible for conducting trenching and shoring in accordance with CALOSHA requirements. Project consultants involved in utility design should specify pipe-bedding materials.

5.5 SLOPE GRADIENTS

Slopes less than 10 feet high may be constructed at 2:1 (horizontal:vertical) or flatter. The contractor is responsible to construct temporary construction slopes in accordance with CALOSHA requirements.

5.6 SITE DRAINAGE

The project civil engineer is responsible for designing surface drainage improvements. With regard to geotechnical engineering issues, we recommend that finish grades be sloped away from buildings and pavements to the maximum extent practical to reduce the potentially damaging effects of expansive soil. As a minimum, we recommend that water is not allowed to pond near foundations, pavements, or exterior flatwork.

6.0 SHADE STRUCTURE FOUNDATION RECOMMENDATIONS

As requested, we are providing foundation recommendations for the proposed shade structure. The foundation recommendations provided below are for drilled piers and are appropriate in areas that are generally level.

6.1 DRILLED PIERS

The shade structure may be supported on a drilled, cast-in-place, straight-shaft friction pier. The following design criteria should be incorporated into the structural design for the proposed shade structure foundation. Actual foundation depth should be determined by the shade structure designer based on structural design considerations.

- Pier diameter: Minimum 12 inches.
- Maximum allowable skin friction: 500 pounds per square foot (psf). Ignore the upper 12 inches for design of vertical support of piers.
- Pier uplift capacity: The allowable pier uplift capacity may be determined using a side friction of 375 psf plus the weight of the pier.

Lateral loads may be resisted by passive pressure along the sides of foundations. An equivalent fluid weight of 300 pounds per cubic foot acting on 2 times the pier diameter and on the face of the pier cap may be used to evaluate passive resistance if the area in front of the pier is level for at least 10 feet; the upper 1 foot of pier embedment should be neglected for passive resistance pressure unless confined by pavement or slab. For foundation depths greater than 12 feet, apply a maximum pressure limit of 2,000 pounds per square foot (psf). For foundation depths less than 12 feet, there is no maximum lateral pressure limit. Pier reinforcements should be designed by the structural engineer and constructed to meet the minimum requirements stipulated by ACI 318.

The bottom of the pier excavation should be dry, clean, and free of loose soil before reinforcing steel is installed and concrete is placed. We recommend that the excavation of the piers be performed under our direct observation to establish that the pier is founded in suitable material and constructed in accordance with the recommendations presented in this letter. In order to minimize potential future pier settlement, all loose soil should be removed from the bottom of pier hole prior to placing concrete. If water collects in the pier shaft, it should be pumped out prior to the placement of concrete. The pier hole should not be allowed to desiccate before placing

concrete. Depressions at the top of the pier resulting from drilling operations or from any other cause should be backfilled to prevent ponding. A concrete collar occurring at the top of the pier as a result of placing should be removed to prevent unnecessary uplift forces against the pier.

7.0 CONCRETE SLABS-ON-GRADE

For the concrete pump track as well as all other exterior flatwork, Provide a minimum section of 6 inches of concrete over 4 inches of Class 2 aggregate base. The base should be compacted to at least 95 percent relative compaction (ASTM D1557) to provide firm, uniform support for the slabs-on-grade. Thicken flatwork edges to at least 10 inches to help control moisture variations in the subgrade and place wire mesh or rebar within the middle third of the slabs to help control the width and offset of cracks. Construct control and construction joints for the concrete flatwork in accordance with current Portland Cement Association Guidelines.

The project structural engineer should determine the appropriate thickness, concrete strength, and reinforcement of the pump track slab-on-grade. The contractor should notify and consult with the structural engineer if slabs-on-grade will be subject to construction traffic or equipment loads. Additional slab thickness or reinforcement may be needed if the slabs-on-grade are subject to construction loads.

7.1 SETTLEMENT AND MAINTENANCE

Post-construction cracking of concrete slabs-on-grade is inherent in any project, especially where moderate soil expansion potential is present. Furthermore, due to the presence of the existing undocumented fill, some additional minor differential settlement can be expected. The recommendations contained in this report are intended to reduce the potential for cracking due to expansive soil and undocumented fill; however, routine repairs and maintenance should be expected for the pump track.

7.2 TRENCH BACKFILL

Backfill and compact all trenches in accordance with Section 5.4.2.

8.0 LIMITATIONS AND UNIFORMITY OF CONDITIONS

This report presents geotechnical recommendations for design of the improvements discussed in Section 1.2 for the subject project. If changes occur in the nature or design of the project, we should be allowed to review this report and provide additional recommendations, if any. It is the responsibility of the owner to transmit the information and recommendations of this report to the appropriate organizations or people involved in design of the project, including but not limited to developers, owners, buyers, architects, engineers, and designers. The conclusions and recommendations contained in this report are solely professional opinions and are valid for a period of no more than 2 years from the date of report issuance.

We strived to perform our professional services in accordance with generally accepted principles and practices currently employed in the area; there is no warranty, express or implied. There are risks of earth movement and property damages inherent in building on or with earth materials. We are unable to eliminate all risks; therefore, we are unable to guarantee or warrant the results of our services.

This report is based upon field and other conditions discovered at the time of report preparation. We developed this report with limited subsurface exploration data. We assumed that our subsurface exploration data is representative of the actual subsurface conditions across the site. Considering possible underground variability of soil, rock, stockpiled material, and groundwater, additional costs may be required to complete the project. We recommend that the owner establish a contingency fund to cover such costs. If unexpected conditions are encountered, notify ENGEO immediately to review these conditions and provide additional and/or modified recommendations, as necessary.

Our geotechnical exploration did not include work to determine the existence of possible hazardous materials. If any hazardous materials are encountered during construction, then notify the proper regulatory officials immediately.

This document must not be subject to unauthorized reuse, that is, reusing without written authorization of ENGEO. Such authorization is essential because it requires ENGEO to evaluate the document's applicability given new circumstances, not the least of which is passage of time. Actual field or other conditions will necessitate clarifications, adjustments, modifications, or other changes to ENGEO's documents. Therefore, ENGEO must be engaged to prepare the necessary clarifications, adjustments, modifications, or other changes before construction activities commence or further activity proceeds. If ENGEO's scope of services does not include on-site construction observation, or if other persons or entities are retained to provide such services, ENGEO cannot be held responsible for any or all claims arising from or resulting from the performance of such services by other persons or entities, and from any or all claims arising from or resulting from clarifications, adjustments, modifications, discrepancies, or other changes necessary to reflect changed field or other conditions.

We determined the lines designating the interface between layers on the exploration logs using visual observations. The transition between the materials may be abrupt or gradual. The exploration logs contain information concerning samples recovered, indications of the presence of various materials such as clay, sand, silt, rock, existing fill, etc., and observations of groundwater encountered. The field logs also contain our interpretation of the subsurface conditions between sample locations. Therefore, the logs contain both factual and interpretative information. Our recommendations are based on the contents of the final logs, which represent our interpretation of the field logs.

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11. Wong, I. G. and Biggar, N. E., 1989, *Seismicity of eastern Contra Costa County, San Francisco Bay Region, California*; Bulletin of the Seismological Society of America, v. 79.



FIGURES

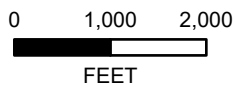
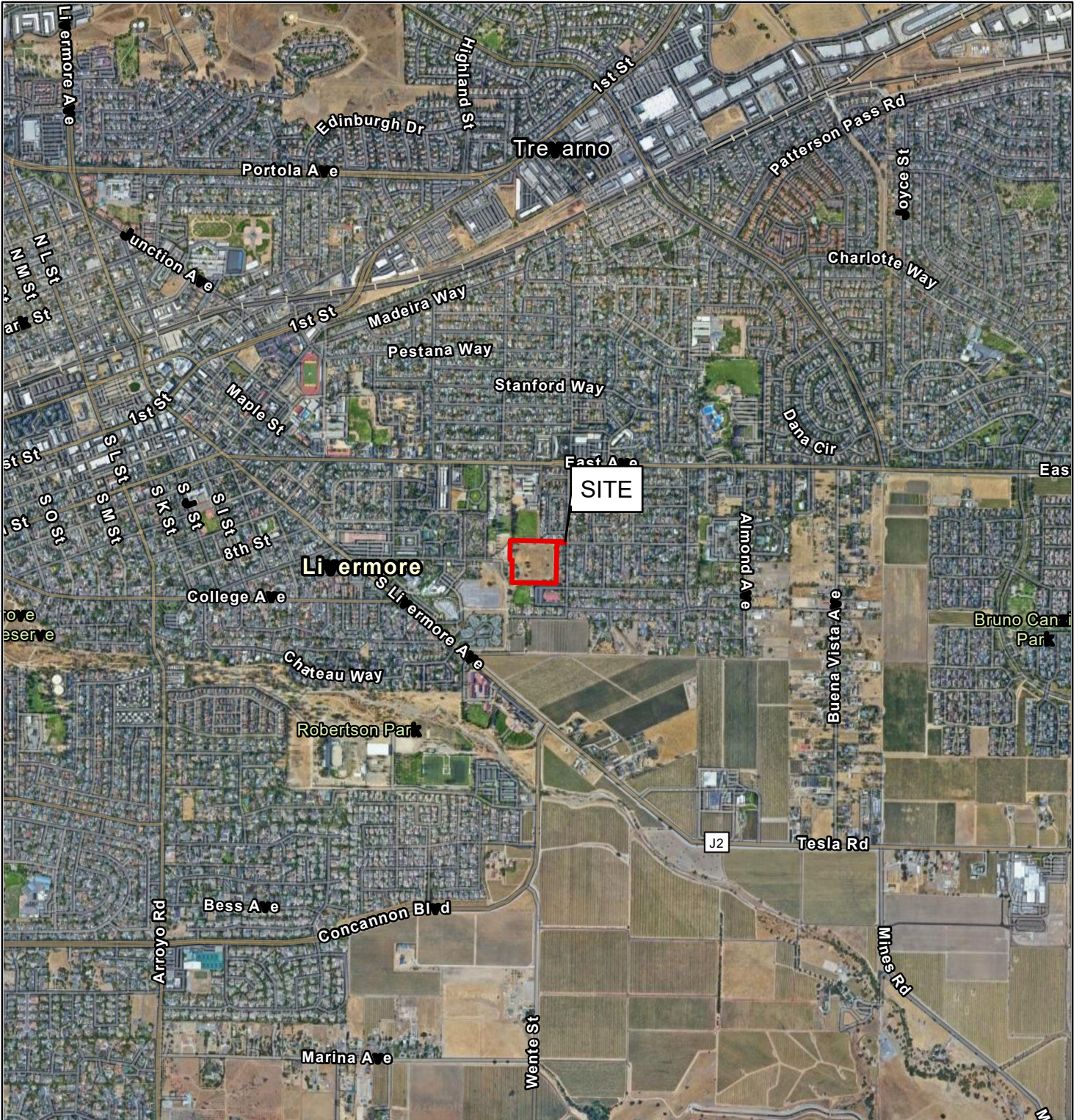
FIGURE 1: Vicinity Map

FIGURE 2: Site Plan

FIGURE 3: Regional Geologic Map

FIGURE 4: Regional Faulting and Seismicity

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BASEMAP SOURCE: GOOGLE EARTH MAPPING SERVICE 6/29/2021



VICINITY MAP
LIVERMORE PUMP TRUCK
LIVERMORE, CALIFORNIA

PROJECT NO. : 20347.000.001

SCALE: AS SHOWN

DRAWN BY: JV

CHECKED BY: SDH

FIGURE NO.



1

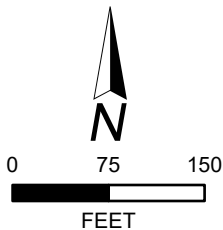
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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

-  DOUBLE RING INFILTRATION TEST (ENGEO, 2022)
-  TEST PIT (ENGEO, 2022)



BASEMAP SOURCE: GOOGLE EARTH MAPPING SERVICE 8/10/2020



SITE PLAN
 LIVERMORE PUMP TRUCK
 LIVERMORE, CALIFORNIA

PROJECT NO. : 20347.000.001

SCALE: AS SHOWN

DRAWN BY: JV

CHECKED BY: SDH

FIGURE NO.

2

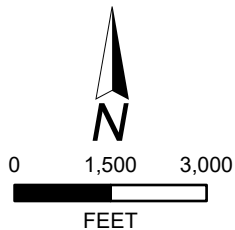
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EXPLANATION

ALL LOCATIONS ARE APPROXIMATE

- Q ALLUVIUM
- QT TERRACE DEPOSITS
- Qo OLDER ALLUVIUM



BASEMAP SOURCE: WAGNER, 1991



REGIONAL GEOLOGIC MAP
LIVERMORE PUMP TRUCK
LIVERMORE, CALIFORNIA

PROJECT NO. : 20347.000.001

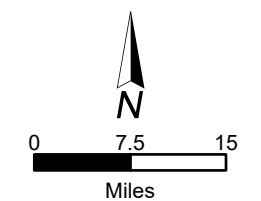
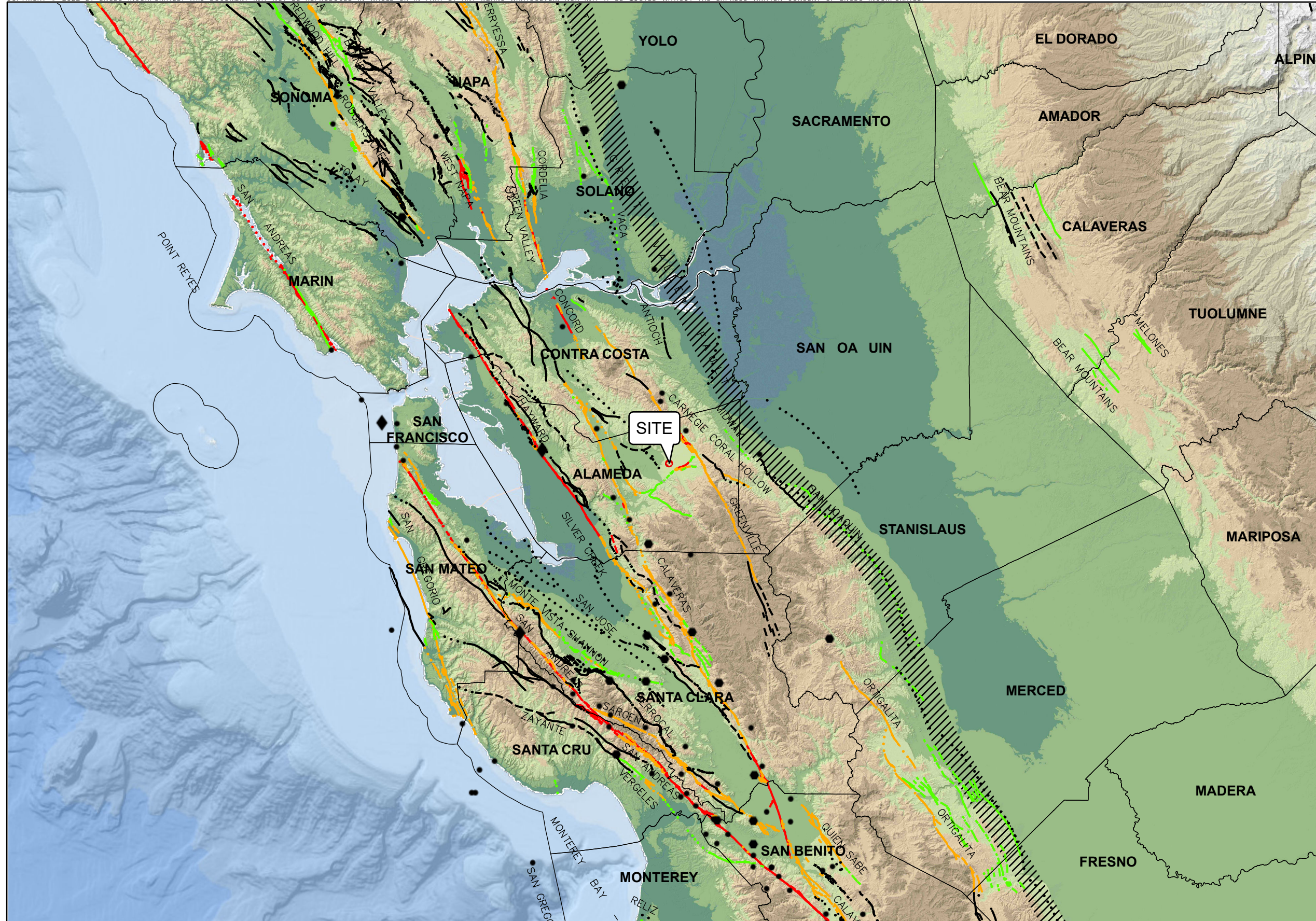
SCALE: AS SHOWN

DRAWN BY: JV

CHECKED BY: SDH

FIGURE NO.

3



- EXPLANATION**
ALL LOCATIONS ARE APPROXIMATE
- EARTH UAKE**
- ◆ MAGNITUDE 7
 - MAGNITUDE 6-7
 - MAGNITUDE 5-6
- QUATERNARY FAULTS**
BASED ON TIME OF MOST RECENT SURFACE DEFORMATION
- HISTORICAL (150 YEARS), WELL CONSTRAINED LOCATION
 - - - HISTORICAL (150 YEARS), MODERATELY CONSTRAINED LOCATION
 - · · · · HISTORICAL (150 YEARS), INFERRED LOCATION
 - LATEST QUATERNARY (15,000 YEARS), WELL CONSTRAINED LOCATION
 - - - LATEST QUATERNARY (15,000 YEARS), MODERATELY CONSTRAINED LOCATION
 - · · · · LATEST QUATERNARY (15,000 YEARS), INFERRED LOCATION
 - LATE QUATERNARY (130,000 YEARS), WELL CONSTRAINED LOCATION
 - - - LATE QUATERNARY (130,000 YEARS), MODERATELY CONSTRAINED LOCATION
 - · · · · LATE QUATERNARY (130,000 YEARS), INFERRED LOCATION
 - UNDIFFERENTIATED QUATERNARY(1.6 MILLION YEARS), WELL CONSTRAINED LOCATION
 - - - UNDIFFERENTIATED QUATERNARY(1.6 MILLION YEARS), MODERATELY CONSTRAINED LOCATION
 - · · · · UNDIFFERENTIATED QUATERNARY(1.6 MILLION YEARS), INFERRED LOCATION
 - ////// GREAT VALLEY FAULT ZONE

BASE MAP SOURCE
ESRI, GEBCO, DELORME, NATURALVUE
COLOR HILLSHADE IMAGE BASED ON THE NATIONAL ELEVATION DATA SET (NED) AT 30 METER RESOLUTION
U.S.G.S. QUATERNARY FAULT DATABASE, 2020
U.S.G.S. HISTORIC EARTHQUAKE DATABASE (1800-PRESENT)
U.S.G.S. OPEN-FILE REPORT 96-705



REGIONAL FAULTING AND SEISMICITY
LIVERMORE PUMP TRUCK
LIVERMORE, CALIFORNIA

PROJECT NO. : 20347.000.001	FIGURE NO.
SCALE: AS SHOWN	4
DRAWN BY: JV CHECKED BY: SDH	



APPENDIX A

BORING LOG KEY TEST PIT LOGS

KEY TO BORING LOGS

MAJOR TYPES		DESCRIPTION	
COARSE-GRAINED SOILS MORE THAN HALF OF MAT'L LARGER THAN #200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LESS THAN 5% FINES	GW - Well graded gravels or gravel-sand mixtures GP - Poorly graded gravels or gravel-sand mixtures
		GRAVELS WITH OVER 12 % FINES	GM - Silty gravels, gravel-sand and silt mixtures GC - Clayey gravels, gravel-sand and clay mixtures
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LESS THAN 5% FINES	SW - Well graded sands, or gravelly sand mixtures SP - Poorly graded sands or gravelly sand mixtures
		SANDS WITH OVER 12 % FINES	SM - Silty sand, sand-silt mixtures SC - Clayey sand, sand-clay mixtures
FINE-GRAINED SOILS MORE THAN HALF OF MAT'L SMALLER THAN #200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50 % OR LESS		ML - Inorganic silt with low to medium plasticity CL - Inorganic clay with low to medium plasticity OL - Low plasticity organic silts and clays
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50 %		MH - Elastic silt with high plasticity CH - Fat clay with high plasticity OH - Highly plastic organic silts and clays
	HIGHLY ORGANIC SOILS		PT - Peat and other highly organic soils

For fine-grained soils with 15 to 29% retained on the #200 sieve, the words "with sand" or "with gravel" (whichever is predominant) are added to the group name.

For fine-grained soil with >30% retained on the #200 sieve, the words "sandy" or "gravelly" (whichever is predominant) are added to the group name.

GRAIN SIZES								
U.S. STANDARD SERIES SIEVE SIZE				CLEAR SQUARE SIEVE OPENINGS				
200 40 10 4				3/4 " 3" 12"				
SILTS AND CLAYS	SAND			GRAVEL		COBBLES	BOULDERS	
	FINE	MEDIUM	COARSE	FINE	COARSE			

RELATIVE DENSITY

SANDS AND GRAVELS	BLOWS/FOOT (S.P.T.)
VERY LOOSE	0-4
LOOSE	4-10
MEDIUM DENSE	10-30
DENSE	30-50
VERY DENSE	OVER 50

CONSISTENCY

SILTS AND CLAYS	STRENGTH*
VERY SOFT	0-1/4
SOFT	1/4-1/2
MEDIUM STIFF	1/2-1
STIFF	1-2
VERY STIFF	2-4
HARD	OVER 4

MOISTURE CONDITION

DRY	Dusty, dry to touch
MOIST	Damp but no visible water
WET	Visible freewater

LINE TYPES

—————	Solid - Layer Break
-----	Dashed - Gradational or approximate layer break

GROUNDWATER SYMBOLS

	Groundwater level during drilling
	Stabilized groundwater level

SAMPLER SYMBOLS

	Modified California (3" O.D.) sampler
	California (2.5" O.D.) sampler
	S.P.T. - Split spoon sampler
	Shelby Tube
	Dames and Moore Piston
	Continuous Core
	Bag Samples
	Grab Samples
NR	No Recovery

(S.P.T.) Number of blows of 140 lb. hammer falling 30" to drive a 2-inch O.D. (1-3/8 inch I.D.) sampler

* Unconfined compressive strength in tons/sq. ft., asterisk on log means determined by pocket penetrometer





TEST PIT LOG

Sunken Garden Pump Track
Livermore, CA
20347.000.001

Logged By: CMJ
Logged Date: 5/12/2022
Equipment: Backhoe

Test Pit
Number

Depth (Feet)

Description

1-DR1

0 – 2¾

CLAYEY SAND (SC), dark yellowish brown, dry to moist, fine- to coarse-grained sand, 40 - 45% fines, approximately 5% fine to coarse gravel [UNDOCUMENTED FILL]

2¾ – 3

CLAYEY GRAVEL (GC), dark yellowish red, moist, fine to coarse gravel, 10-15% fine- to coarse-grained sand, 40 – 45% medium- to high-plasticity fines [UNDOCUMENTED FILL]

Bottom of test pit at approximately 3 feet. Groundwater not encountered.

1-TP1

0 – 10

CLAYEY GRAVEL WITH SAND (GC), dark brown, dry to moist, 20 – 30% fine- to coarse-grained sand, 14.8% fines, 5 – 10% cobble, contains boulders, asphalt/brick debris, charcoal fragments [UNDOCUMENTED FILL]

Bottom of test pit at approximately 10 feet. Groundwater not encountered.



TEST PIT LOG

Sunken Garden Pump Track
Livermore, CA
20347.000.001

Logged By: CMJ
Logged Date: 5/12/2022
Equipment: Backhoe

Test Pit Number	Depth (Feet)	Description
1-TP2	0 – 1	SANDY LEAN CLAY WITH GRAVEL (CL), olive brown, dry to moist, 30 – 35% fine- to coarse-grained sand, 10 – 20% fine to coarse gravel, low plasticity [UNDOCUMENTED FILL]
	1 - 2	CLAYEY SAND WITH GRAVEL (SC), reddish yellow, moist, fine- to coarse-grained, 28.9% fines, 10 – 20% fine to coarse gravel, low plasticity [UNDOCUMENTED FILL]
	2 – 5	CLAYEY GRAVEL WITH SAND (GC), brown, moist, fine- to coarse gravel, 20 – 30% fine- to coarse grained sand, 15 – 25% fines, contains cobble, metal/wood/plastic debris [UNDOCUMENTED FILL]
	5 – 8½	SILT (ML), dark brown, moist, 15 – 20% fine- to coarse-grained sand, 10 – 15% fine to coarse gravel, non-plastic, contains plastic/asphalt debris [UNDOCUMENTED FILL]
	8½ – 10	CLAYEY GRAVEL WITH SAND (GC), yellowish brown and reddish brown, moist, fine to coarse gravel, 20 – 30% fine- to coarse-grained sand, 10 – 15% fines, 10 – 15% cobble, contains black clay fragments [UNDOCUMENTED FILL]
Bottom of test pit at approximately 10 feet. Groundwater not encountered.		



TEST PIT LOG

Sunken Garden Pump Track
Livermore, CA
20347.000.001

Logged By: CMJ
Logged Date: 5/12/2022
Equipment: Backhoe

Test Pit Number	Depth (Feet)	Description
1-TP3	0 – 2½	CLAYEY SAND (SC), red, dry to moist, 41.7% fines, 25 – 35% fine- to coarse-grained sand, 10 – 20% fine to coarse gravel, medium plasticity, contains wood debris [UNDOCUMENTED FILL]
	2½ - 3½	CLAYEY GRAVEL WITH SAND (GC), brown, moist, fine to coarse gravel, 20 – 30% fine- to coarse-grained sand, 20 - 25% fines, 10 – 15% cobble, contains asphalt debris [UNDOCUMENTED FILL]
	3½ – 4½	SILT (ML), dark brown, moist, 10 – 15% fine- to coarse-grained sand, non-plastic[FILL]
	4½ - 8½	CLAYEY GRAVEL WITH SAND (GC), dark yellowish brown, moist, fine- to coarse gravel, 20 – 30% fine- to coarse-grained sand, 20 - 30% fines, 10 – 20% cobble, contains boulders, asphalt/brick debris [UNDOCUMENTED FILL]
	8½ - 10	CLAYEY GRAVEL WITH SAND (GC), light olive brown, moist, fine to coarse gravel, 20 – 30% fine- to coarse-grained sand, 15 - 25% fines, contains cobble [UNDOCUMENTED FILL]
Bottom of test pit at approximately 10 feet. Groundwater not encountered.		



TEST PIT LOG

Sunken Garden Pump Track
Livermore, CA
20347.000.001

Logged By: CMJ
Logged Date: 5/12/2022
Equipment: Backhoe

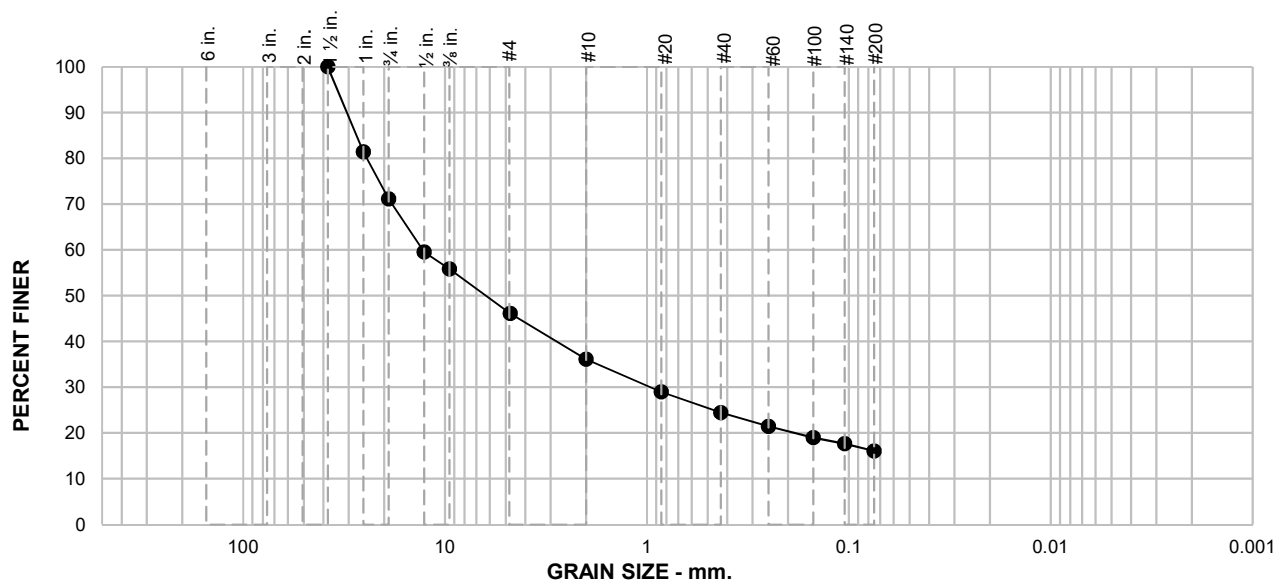
Test Pit Number	Depth (Feet)	Description
1-TP4	0 – 2½	CLAYEY GRAVEL WITH SAND (GC), dark yellowish brown, dry to moist, fine to coarse gravel, 30% fine- to coarse-grained sand, 16% fines, contains cobble, metal debris [UNDOCUMENTED FILL]
	2½ – 3½	CLAYEY GRAVEL WITH SAND (GC), olive brown, moist, fine to coarse gravel, 30 – 40% fine- to coarse-grained sand, 20 - 30% fines, contains cobble, asphalt/metal/brick debris UNDOCUMENTED [FILL]
	3½ - 4½	SILT (ML), dark brown, moist, 10 – 15% fine- to coarse-grained sand, non-plastic [UNDOCUMENTED FILL]
	4½ - 8	CLAYEY GRAVEL WITH SAND (GC), dark brown, moist, fine to coarse gravel, 25 – 35% fine- to coarse-grained sand, 20 - 30% fines, 5 – 10% cobble, contains asphalt debris [UNDOCUMENTED FILL]
	8 - 10	CLAYEY GRAVEL WITH SAND (GC), pale olive, moist, fine to coarse gravel, 15 – 25% fine- to coarse-grained sand, 20 - 30% fines, contains cobble [UNDOCUMENTED FILL]
Bottom of test pit at approximately 10 feet. Groundwater not encountered.		



APPENDIX B
LABORATORY TEST DATA

PARTICLE SIZE DISTRIBUTION REPORT

ASTM D6913, Method A



SAMPLE ID: 1-TP4 @ 3'

DEPTH (ft): 3

LOCATION: 1-TP4

% +75mm	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
	29	25	10	12	8	16	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)	SOIL DESCRIPTION
1-½ in.	100			See exploration logs
1 in.	81			
¾ in.	71			
½ in.	60			
⅜ in.	56			
#4	46			
#10	36			
#20	29			
#40	24			
#60	21			
#100	19			
#140	18			
#200	16			

ATTERBERG LIMITS		
PL =	LL =	PI =

COEFFICIENTS		
D ₉₀ = 30.7784 mm	D ₈₅ = 27.6634 mm	D ₆₀ = 12.7000 mm
D ₅₀ = 6.2743 mm	D ₃₀ = 0.9605 mm	D ₁₅ =
D ₁₀ =	C _u =	C _c =

CLASSIFICATION
USCS =

REMARKS

* (no specification provided)

CLIENT: Livermore Area Recreation & Park District



PROJECT NAME: Sunken Gardens Pump Track

PROJECT NO: 20347.000.001 PH001

PROJECT LOCATION: Livermore, CA

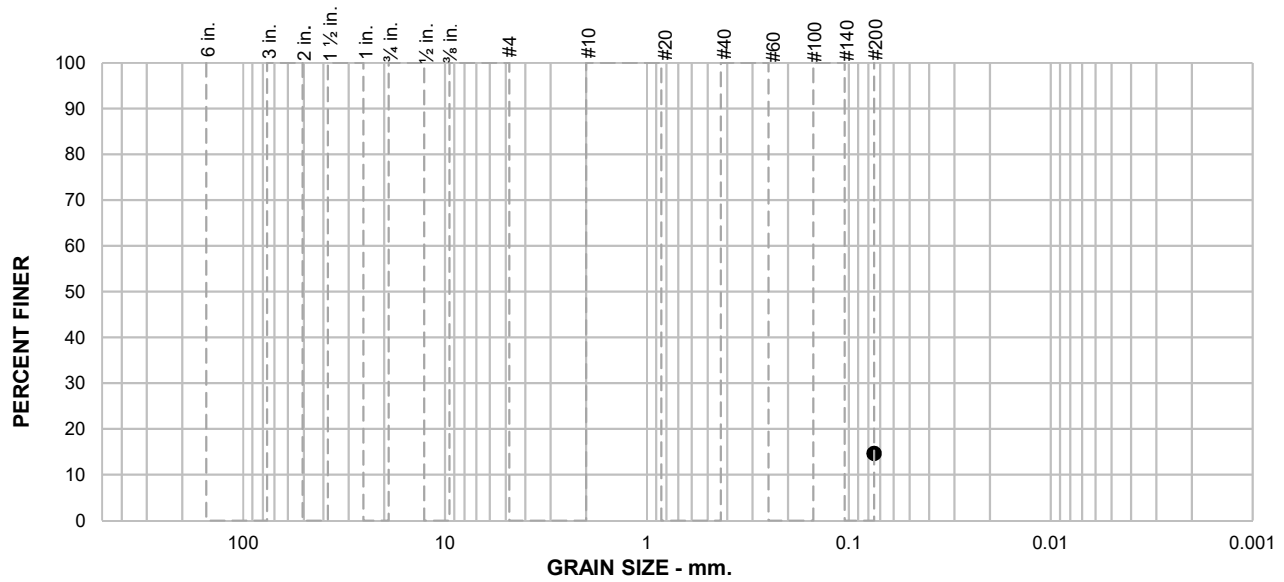
REPORT DATE: 6/2/2022

TESTED BY: K. Lecce

REVIEWED BY: D. Bryant

PARTICLE SIZE DISTRIBUTION REPORT

ASTM D1140, Method B



SAMPLE ID: 1-TP1 @ 7'
DEPTH (ft): 7
LOCATION: 1-TP1

% +75mm	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
							14.6
SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)	SOIL DESCRIPTION			
#200	14.6			See exploration logs			
ATTERBERG LIMITS							
PL =		LL =		PI =			
COEFFICIENTS							
D ₉₀ =		D ₈₅ =		D ₆₀ =			
D ₅₀ =		D ₃₀ =		D ₁₅ =			
D ₁₀ =		C _u =		C _c =			
CLASSIFICATION							
USCS =							
REMARKS							
Soak time = 180 min Dry sample weight = 1784.3 g Largest particle size ≥ No. 4 Sieve							

* (no specification provided)

CLIENT: Livermore Area Recreation & Park District



PROJECT NAME: Sunken Gardens Pump Track

PROJECT NO: 20347.000.001 PH001

PROJECT LOCATION: Livermore, CA

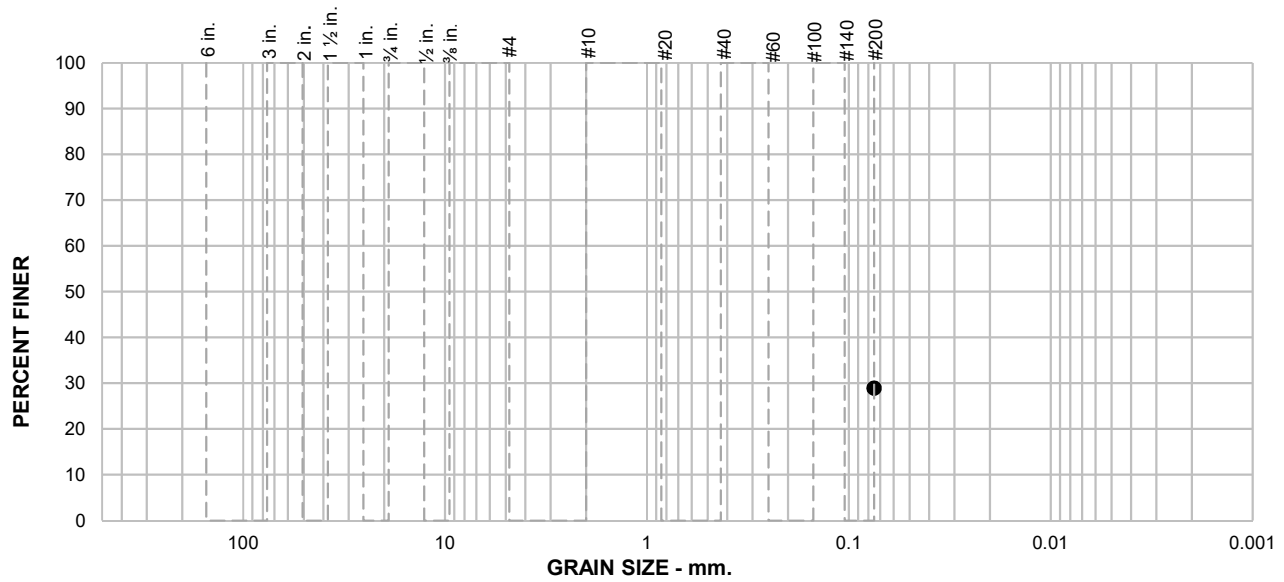
REPORT DATE: 6/2/2022

TESTED BY: K. Lecce

REVIEWED BY: D. Bryant

PARTICLE SIZE DISTRIBUTION REPORT

ASTM D1140, Method B



SAMPLE ID: 1-TP2 @ 1.5'
DEPTH (ft): 1.5
LOCATION: 1-TP2

% +75mm	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
							28.9
SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)	SOIL DESCRIPTION			
#200	28.9			See exploration logs			
ATTERBERG LIMITS							
PL = 14		LL = 23		PI = 9			
COEFFICIENTS							
D ₉₀ =		D ₈₅ =		D ₆₀ =			
D ₅₀ =		D ₃₀ =		D ₁₅ =			
D ₁₀ =		C _u =		C _c =			
CLASSIFICATION							
USCS =							
REMARKS							
PI: ASTM D4318, Wet Method Soak time = 180 min Dry sample weight = 581.6 g Largest particle size < No. 4 Sieve							

* (no specification provided)

CLIENT: Livermore Area Recreation & Park District



PROJECT NAME: Sunken Gardens Pump Track

PROJECT NO: 20347.000.001 PH001

PROJECT LOCATION: Livermore, CA

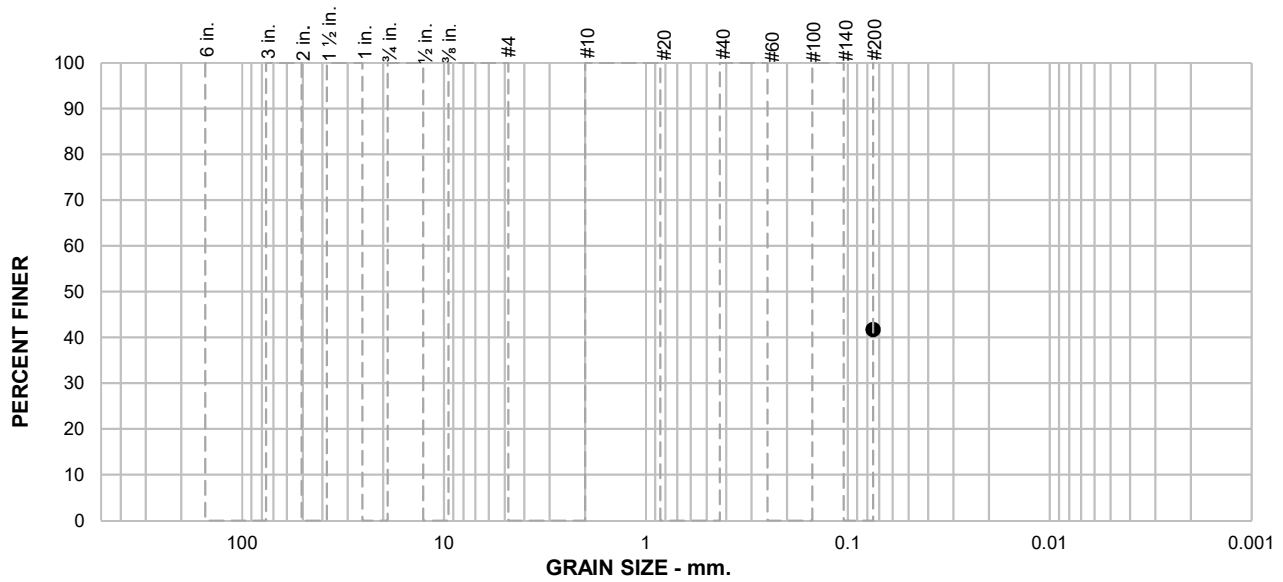
REPORT DATE: 6/2/2022

TESTED BY: K. Lecce

REVIEWED BY: D. Bryant

PARTICLE SIZE DISTRIBUTION REPORT

ASTM D1140, Method B



SAMPLE ID: 1-TP3 @ 1'
DEPTH (ft): 1
LOCATION: 1-TP3

% +75mm	% GRAVEL		% SAND			% FINES	
	COARSE	FINE	COARSE	MEDIUM	FINE	SILT	CLAY
							41.7
SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)	SOIL DESCRIPTION			
#200	41.7			See exploration logs			
ATTERBERG LIMITS							
PL = 15		LL = 29		PI = 14			
COEFFICIENTS							
D ₉₀ =		D ₈₅ =		D ₆₀ =			
D ₅₀ =		D ₃₀ =		D ₁₅ =			
D ₁₀ =		C _u =		C _c =			
CLASSIFICATION							
USCS =							
REMARKS							
PI: ASTM D4318, Wet Method Soak time = 180 min Dry sample weight = 978.5 g Largest particle size ≥ No. 4 Sieve							

* (no specification provided)

CLIENT: Livermore Area Recreation & Park District



PROJECT NAME: Sunken Gardens Pump Track

PROJECT NO: 20347.000.001 PH001

PROJECT LOCATION: Livermore, CA

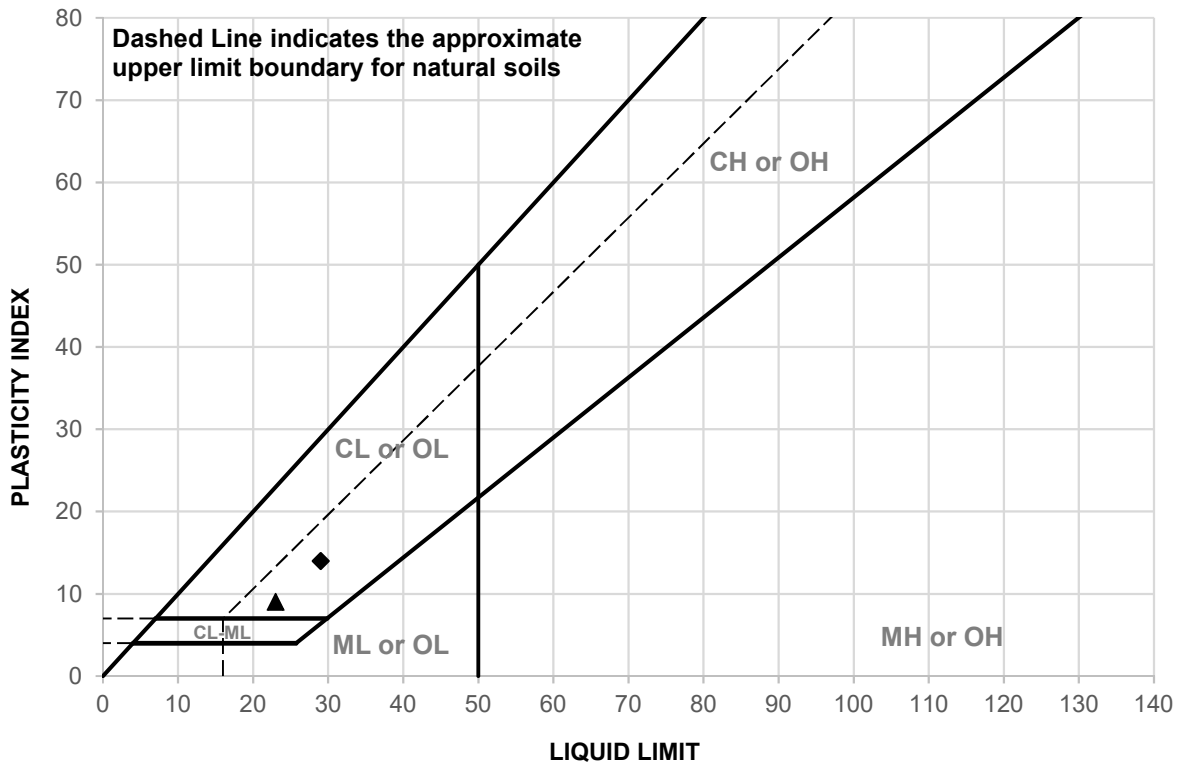
REPORT DATE: 6/2/2022

TESTED BY: K. Lecce

REVIEWED BY: D. Bryant

LIQUID AND PLASTIC LIMITS TEST REPORT

ASTM D4318



	SAMPLE ID	DEPTH (ft)	MATERIAL DESCRIPTION	LL	PL	PI
▲	1-TP2 @ 1.5'	1.5	See exploration logs	23	14	9
◆	1-TP3 @ 1'	1	See exploration logs	29	15	14

	SAMPLE ID	TEST METHOD	REMARKS
▲	1-TP2 @ 1.5'	PI: ASTM D4318, Wet Method	
◆	1-TP3 @ 1'	PI: ASTM D4318, Wet Method	



CLIENT: Livermore Area Recreation & Park District
PROJECT NAME: Sunken Gardens Pump Track
PROJECT NO: 20347.000.001 PH001
PROJECT LOCATION: Livermore, CA
REPORT DATE: 5/31/2022
TESTED BY: K. Lecce
REVIEWED BY: D. Bryant

