darden
architects

6790 N. West Avenue
Fresno, California 93711
Tel: 559.448.8051
Fax: 559.446.1765
www.dardenarchitects.com

ADDENDUM NO.04 DATE: 11/04/21

PROJECT:
'Matilda Torres High School, Toros Stadium'
Matilda Torres High School
16645 Road 26. Madera, CA 93638

OWNER:
Madera Unified School District
1902 Howard Road
Madera, CA 93637-5123

ARCHITECT:
DARDEN ARCHITECTS, INC.
Attention: Matthew Heiss
6790 N. West Avenue
Fresno, California 93711
T. (559) 448-8051
F. (559) 446-1765

DARDEN PROJECT NO. 0622.4
DSA File Nos. 10-C3
DSA APPL. NO. 02-118396

It will be the responsibility of the General Contractor to submit the information contained in this addendum to all its subcontractors and suppliers. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification.

The following additions, deletions, and revisions to the SHEETS and Project Manual are hereby made and do become a part of these Contract Documents.

INDEX OF ADDENDA TRANSMITTED HEREWITH

PROJECT MANUAL:

SPECIFICATIONS:

CHANGES TO SPECIFICATIONS ..... AD4-SP01 thru AD4-SP03

SHEETS:

CHANGES TO SHEETS:

LANDSCAPE..... AD4-L01

ATTACHMENTS:

DOCUMENTS OR SPECIFICATIONS:

00495	**IRAN CONTRACTING ACT CERTIFICATION**
AD3-ID-5	Revised Interiors exhibit Appendix B.2

PRE-BID RFI LOG

SHEETS:

N/A

PROJECT MANUAL:

SPECIFICATIONS:

CHANGES TO SPECIFICATIONS:

AD4-SP01 Refer to Specification Section FRONT END DOCUMENTS 000000

1. Insert attached Document "Iran Contracting Act Certification" to Front end Documents as indicated in table of contents

AD4-SP02 Refer to specification Section 130034 OUTDOOR BLEACHERS

1. See Part 2, Item 2.1, Paragraph A, Subitem 1. "Specified Product Manufacturer"

a. Add Subitem 2 to specification as follows:

2. Approved alternate manufacturers:
   a. STURDISTEEL INC.
      1) Outdoor Bleachers (Grandstands)
      2) Press Box

AD4-SP03 See section 033000 CAST IN PLACE CONCRETE

1.Refer to Part 2, Section 2.4, A, 6, b.

a. Revise item 1) to read 3,500 psi in 28 days.

AD4-SP04 See Appendix B.2 ID Sheets

1. Replace Sheet ID-5 with attached exhibit AD3-ID5

a. Schluter Strip requirements at outside corner transitions clarified.

CHANGES TO DRAWINGS:

LANDSCAPE:

AD4-L01 Refer to Sheet SD/L200

1. Revise tag in Upper left corner for Dietes Bicolor to read "1g"
   a. All Dietes Bicolor shrubs to be 1 gal size.

PRE BID RFI LOG

HCCI Pred Bid RFI – 001 thru 013
AMG pre bid RFI-001 thru 006
AC RFI-01 thru 04
Avidex RFI 1 thru 3
Marina Landscape RFI #1
Bedards Pre bid RFI#01

See attached Log for responses

END OF ADDENDUM NO. 04

DOCUMENT 00495
IRAN CONTARACTING ACT CERTIFICATION
(TO BE EXECUTED AND SUBMITTED WITH BID)
Public Contract Code Sections 2202-2208

Pursuant to Public Contract Code 2204.(a) A public entity shall require a person that is submits a bid or proposal to, or otherwise proposes to enter into or renew a contract with, a public entity with respect t a contract for goods or services of one million dollars ($1,000,000) or ore to certify, at the time the bid is submitted or the contract is renewed, that the person is not identified on a list created pursuant to subdivision (b) of Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Section 2202.5 or as a person described in subdivision 9b) of Section 2202.5, as applicable.

To comply with this requirement, please insert your company/entity and Federal ID number (if available) and complete **one** of the options below. Please note, California law established penalties for providing false certifications, including civil penalties equal to the greater of $250,000 or twice the amount of the contract for which the false certification was made, contract termination and three-year ineligibility to bid on contract in accordance with Public Contract Code section 2205.

OPTION No.1 – CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the company/entity identified below, and the company/entity identified below is not on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person or entity, for 45 days or more, if that other person or company/entity will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS in accordance with subdivision (b) of Public Contract Code 2203

Company Name/Financial Institution (printed) Federal ID Number (or n/a)

_____ _____

By (Authorized Signature)

_____

Printed Name & Title of Person Signing

_____

Date Executed Executed in the County of _____in

_____ The State of_____

OPTION No.2 – EXEMPTION

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a vendor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below and attach documentation demonstrating the exemption approval.

Vendor Name/Financial Institution (Printed) Federal ID Number (or n/a)

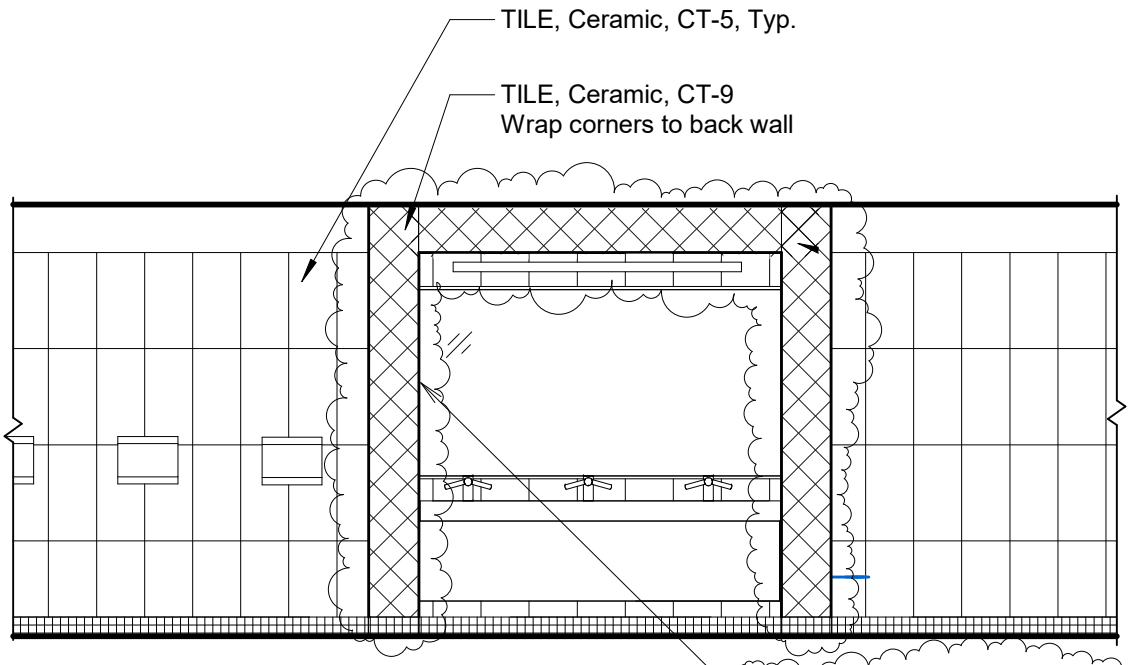
_____

By (Authorized Signature)

_____

Printed Name & Title of Person Signing Date Executed

_____



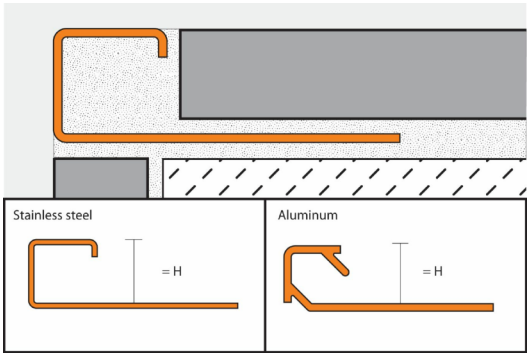
Tile Pattern Typical @ Sink Walls

Provide Schluter QUADEC finishing and edge profile at all outside corners.
Finish to be Aluminum Satin Anodized.

Legend

- TILE, Ceramic Tile, CT-2
- TILE, Ceramic Tile, CT-5
- TILE, Ceramic Tile, CT-9

Schluter QUADEC Detail



Tile Pattern- Buildings L and M1, M2

darden architects
ARCHITECTURE · PLANNING · INTERIORS
Edwin S. Darden Jr. AIA · Martin E. Dietz AIA CCS · Edwin C. Goodwin AIA
Robert L. Petithomme AIA · Grant E. Dodson AIA · DeDe Darnell ASID
Antonio J. Avila AIA · Michael K. Fennacy AIA · Michael J. Nelson
Sean P. Mendoza AIA · Leslie A. Rau IIDA · Martin A. Ilic
Gerardo Padron · Mathew R. Heiss AIA · Andrew A. Corral AIA
6790 N. West Avenue · Fresno, California 93711 · 559 448-8051 · Fax 559 446-1765

Project No:	0622.4
Date:	05/28/2021
Scale:	As indicated

Matilda Torres High School, Toros Stadium
Madera United School District
Madera, CA

AD3-ID-5

REQUEST FOR INFORMATION

RFI No.: HCCI#001

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 10.18.2021

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: MTHS Stadium

INFORMATION REQUESTED:

Notice to Bidders states a bid time of 10am. Typical industry standard for this area is a 2-3pm bid time. Would it be possible to modify this time to 2pm? Sometimes portions of the sub market don't catch in the documents the 10am time and don't get their bids in for the GC's to use. This reduces the amount of sub competition and as a result can drive the cost higher than it needed to be. Please advise.

Cost Impact: None: _____ Signature: _____

Schedule Impact: None: _____ Days Pages Attached: _____

Trade/Contractor: Schedule Task No/Item:

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in the Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

If the Contractor considers that this supplemental instruction requires a change in the Contract Sum or Contract Time, the Contractor shall not proceed with this Work and shall promptly submit an itemized proposal to the Architect for doing this work. If your proposal is found to be satisfactory and in order, this supplemental instruction will be superseded by a Construction Change Directive.

Refered To: Refered Date: Return Date:

SUPPLEMENTAL INSTRUCTIONS:

The District has agreed to adjust Bid due time to 2:00 PM. See clarifications and updated requirements in forthcoming addenda 3.

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 10/29/2021

Copy: ☐Owner ☐Inspector ☐Testing Lab ☐Structural ☐Mech. ☐Elec ☐File ☐Other Pages Attached: _____

REQUEST FOR INFORMATION

RFI No.: HCCI#002

To: Darden Architects, Inc.
6790 North West Avenue
Fresno, California 93711

Attn: Matt Heiss

Date: 10.18.2021
Respond By:

Architect Project No.
Project: MTHS Stadium

INFORMATION REQUESTED: Structural Steel Fabrication Testing Lab Back Charges

Spec Section 051200 2.6B regarding location of structural steel shop inspections only mentions per diem and other contractor charges should the fabrication location be over 75 miles from the project site. Please provide a breakdown of what these charges will be per day.

Additionally, please advise what, if any, backcharges for shop inspection will be assessed should a steel contractor decide to run the fabrication plant in shifts? This response should include hourly rates and any other charges that the district would backcharge to the contractor. District should be advised that this is a distinct possibility given the schedule and current market conditions for the procurement of material.

Off-site inspection work hours over 8 hours in a given day, work that begins or ends outside normal working hours (normal working hours are 7:00 AM to 6:00 PM), work that starts or ends during Second Shift work hours (work that commences after 2:00 PM or before 4:00 AM during any twenty-four (24) hour period commencing at 12:01 AM), and on Saturdays will be billed at 1.5 times the applicable inspection rate. Off-site inspection work hours in excess of 12 hours per day, Second Shift or Saturday work hours in excess of 8 hours per day, and work on Sundays/Holidays will be billed at 2.0 times the applicable inspection rate.

Regular normal working hour rates are as follows: 1) rebar sampling/tagging is $55/hour; 2) CMU block sampling/tagging is $55/hour; 3) shop welding inspection is $55/hour; 4) shop non-destructive testing (NDT) is $105/hour. Salem charges a two-hour minimum and increment for all inspections.

In addition to applicable inspection rate increases, off-site inspections in excess of 50 miles from our Fresno Salem office will be assessed as: 1) fuel charges of $0.35/mile; 2) travel time fees at $55/hour of travel; 3) airfare costs including travel insurance; 4) daily per diem (food and sustenance) of $41.50/overnight stay (including weekends); 5) hotel costs per overnight stay (including weekends) with contractor to assess fees in locale; 6) daily rental car fees per overnight stay (including weekends) with contractor to assess fees in locale. Actual incurred charges will be billed to the client for airfare, hotel, and rental car fees, which will be subject to 15% markup.

Consultant's Signature: _____ Architect's Signature: _____

Date: _____ Date 11/4/2021

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: ____

REQUEST FOR INFORMATION

RFI No.: HCCI#003

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 10.18.2021

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: MTHS Stadium

INFORMATION REQUESTED: 2% Steel Allowance

General Note#8 on G/S101 states for the GC to carry a 2% allowance on the cost of the structural/Misc. Steel, and Reinforcing Steel to be used at the discretion of the SEOR. Please confirm it is desired for the GC's to carry this 2% allowance in the bid. Would it be possible to simply increase the already required $675K allowance to include this 2%.

Cost Impact: None: _____ Signature: _____

Schedule Impact: None: _____ Days Pages Attached: _____

Trade/Contractor: Schedule Task No/Item:

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in the Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

If the Contractor considers that this supplemental instruction requires a change in the Contract Sum or Contract Time, the Contractor shall not proceed with this Work and shall promptly submit an itemized proposal to the Architect for doing this work. If your proposal is found to be satisfactory and in order, this supplemental instruction will be superseded by a Construction Change Directive.

Refered To: Refered Date: Return Date:

SUPPLEMENTAL INSTRUCTIONS:

Contractor to provide 2% allowance on the cost of the structural misc. and reinforcing steel as indicated on sheet G/S101 note #8.

Owners 675,000 dollar allowance and 2% steel allowance are to be held separately as individual line items. Do not combine.

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 10/29/21

Copy: ☐Owner ☐Inspector ☐Testing Lab ☐Structural ☐Mech. ☐Elec ☐File ☐Other Pages Attached: _____

REQUEST FOR INFORMATION

RFI No.: HCCI#004

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 10.18.2021

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: MTHS Stadium

INFORMATION REQUESTED: Concrete FF & FL Testing

Concrete Specification 033000 requires that the GC pays for FF & FL testing of the newly poured slabs. Please confirm this requirement, it would seem this should be covered in the scope of services to be performed by the Testing lab already employed by the school district.

Cost Impact: None:

Schedule Impact: None: Days

Signature:

Pages Attached:

Trade/Contractor:

Schedule Task No/Item:

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in the Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

If the Contractor considers that this supplemental instruction requires a change in the Contract Sum or Contract Time, the Contractor shall not proceed with this Work and shall promptly submit an itemized proposal to the Architect for doing this work. If your proposal is found to be satisfactory and in order, this supplemental instruction will be superseded by a Construction Change Directive.

Refered To:

Refered Date:

Return Date:

SUPPLEMENTAL INSTRUCTIONS:

Provide FL and FF testing as indicated in specification.

Consultant's Signature:

Date:

Architect's Signature:

Date 11/4/2021

Copy: ☐Owner ☐Inspector ☐Testing Lab ☐Structural ☐Mech. ☐Elec ☐File ☐Other Pages Attached:

REQUEST FOR INFORMATION

RFI No.: HCCI#005

To: Darden Architects, Inc.
6790 North West Avenue
Fresno, California 93711

Attn: Matt Heiss

Date: 10.18.2021
Respond By:
Architect Project No.
Project: MTHS Stadium

INFORMATION REQUESTED: Air Entrained Concrete

Concrete Specification 033000 notes that SOG is to be 4000PSI concrete with 6% air. This would require the use of an air entrainment additive. The use of the additives on troweled finishes greatly increases the risk of delamination. Please advise if the 6% air entrainment requirement can be removed?

Secondly, the concrete spec also states that SOMD should be 110PCF +/-3PCF with a 4-7& air entrainment. Mixes are available that are 115-116PCF and do not require air entrainment. For the same reason noted above would a mix that is 115-116PCF with no air entrainment be acceptable?

BUEHLER RESPONSE

1. THE STRUCTURAL DRAWINGS INDICATE THAT SOG SHOULD BE NORMAL WEIGHT CONCRETE WITH F'c = 3500 PSI AT 28 DAYS. AIR ENTRAINMENT FOR THE SOG MIX DESIGN IS NOT REQUIRED. THE SPECIFICATIONS WILL BE REVISED TO AGREE WITH THE APPROVED STRUCTURAL DRAWINGS.

2. FOR SLAB OVER METAL DECK (SOMD) IT IS OUR INDERSTANDING THAT THE DENSITY CURRENTLY SPECIFIED (110 PCF +/- 3 PCF) FOR BUILDING Q IS CRITICAL FOR ACHIEVING THE REQUIRED FIRE RATING. ARCHITECT TO REVIEW AND RESPOND.

TIM KELLY SE BUEHLER ENGINEERING NOV 2, 2021

1. Provide SOMD mix designs as specified in section 033000 and as indicated on plans.

Consultant's Signature: _____ Architect's Signature: _____

Date: _____ Date _____

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: ____

REQUEST FOR INFORMATION

RFI No.: HCCI#006

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 10.18.2021

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: MTHS Stadium

INFORMATION REQUESTED: Dugout Benches

Please provide a specification for the dugout benches. The detail on A/SDX101 does not list a manufacturer or model. If this is supposed to be Misc. Steel fabricated item what is the plank material to be made from?

RESPONSE:

Dugout benches are a custom fabricated item. See clarification of bench detail in forthcoming addenda #3

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 10/29/21

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: ____

REQUEST FOR INFORMATION

RFI No.: HCCI#007

To: Darden Architects, Inc.
6790 North West Avenue
Fresno, California 93711

Date: 10.18.2021

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: MTHS Stadium

INFORMATION REQUESTED: Subcontractor Listings

Please confirm that only the following information is to be provided on bid day as required by public contract code:

1. **Company Name**
2. **Location of Business (City/State only)**
3. **Type of Work or Trade**
4. **CSLB# (No Exp Date)**
5. **DIR# (No Exp Date)**

Please confirm that all other requested information on the Designation of subcontractors can be provided within 24 hours of bid opening.

RESPONSE:

Subcontractor Listings Form shall include company name and type of work/trade for each subcontractor required to be listed. All remaining information requested on the subcontractor listing form may be submitted within 24 hours of the bid due date/time

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 11/4/2021

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: ____

REQUEST FOR INFORMATION

RFI No.: HCCI#008

To: Darden Architects, Inc.
6790 North West Avenue
Fresno, California 93711

Attn: Matt Heiss

Date: 10.18.2021
Respond By:

Architect Project No.
Project: MTHS Stadium

INFORMATION REQUESTED: Bid Day Required Items

Please confirm that only the following is to be turned in on bid day:

1. Completed Bid Form
2. Prime Point of Contact
3. Contractor's Certificate Regarding Workers Compensation
4. Bid Bond
5. Designation of Subcontractors
6. Information Required of Bidders
7. Asbestos Free Materials Certification
8. Recycled Content Certification
9. Drugfree Workplace Certification
10. Certificate Regarding Alcoholic Beverage and Tobacco Free Campus Policy
11. Public Works Contractor Registration Certification
12. Non-Collusion Declaration

and All other forms can be completed once the bid is successful.

•HCCI #8 – All items listed in RFI #8 are due at time of bid turn-in.
Also required are:
The Iran Contracting Act Certification, fully executed – please see attached.
The Contractor and Subcontractor Fingerprinting Requirements form – see response to AMG RFI #1
Insurance certificates, payment and performance bonds will be executed/provided by the successful bidder after award.

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 11/4/2021

Copy: ☐Owner ☐Inspector ☐Testing Lab ☐Structural ☐Mech. ☐Elec ☐File ☐Other Pages Attached: ____

DOCUMENT 00495
IRAN CONTARACTING ACT CERTIFICATION
(TO BE EXECUTED AND SUBMITTED WITH BID)
Public Contract Code Sections 2202-2208

Pursuant to Public Contract Code 2204.(a) A public entity shall require a person that is submits a bid or proposal to, or otherwise proposes to enter into or renew a contract with, a public entity with respect t a contract for goods or services of one million dollars ($1,000,000) or ore to certify, at the time the bid is submitted or the contract is renewed, that the person is not identified on a list created pursuant to subdivision (b) of Section 2203 as a person engaging in investment activities in Iran described in subdivision (a) of Section 2202.5 or as a person described in subdivision 9b) of Section 2202.5, as applicable.

To comply with this requirement, please insert your company/entity and Federal ID number (if available) and complete **one** of the options below. Please note, California law established penalties for providing false certifications, including civil penalties equal to the greater of $250,000 or twice the amount of the contract for which the false certification was made, contract termination and three-year ineligibility to bid on contract in accordance with Public Contract Code section 2205.

OPTION No.1 – CERTIFICATION

I, the official named below, certify I am duly authorized to execute this certification on behalf of the company/entity identified below, and the company/entity identified below is not on the current list of persons engaged in investment activities in Iran created by DGS and is not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person or entity, for 45 days or more, if that other person or company/entity will use the credit to provide goods or services in the energy sector in Iran and is identified on the current list of persons engaged in investment activities in Iran created by DGS in accordance with subdivision (b) of Public Contract Code 2203

Company Name/Financial Institution (printed) Federal ID Number (or n/a)

_____ _____

By (Authorized Signature)

_____

Printed Name & Title of Person Signing

_____

Date Executed Executed in the County of _____in

_____ The State of_____

OPTION No.2 – EXEMPTION

Pursuant to Public Contract Code sections 2203(c) and (d), a public entity may permit a vendor/financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit a proposal for, or enters into or renews, a contract for goods and services

If you have obtained an exemption from the certification requirement under the Iran Contracting Act, please fill out the information below and attach documentation demonstrating the exemption approval.

Vendor Name/Financial Institution (Printed) Federal ID Number (or n/a)

_____

By (Authorized Signature)

_____

Printed Name & Title of Person Signing Date Executed

_____

REQUEST FOR INFORMATION

RFI No.: HCCI#009

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Attn: Matt Heiss

Date: 10.18.2021

Respond By:

Architect Project No.

Project: MTHS Stadium

INFORMATION REQUESTED: Temporary Utilities

Please provide location(s) for connection to utilities for temporary use during construction, specifically power and water. Would it be possible for the district to allow the contractor to connect to the electrical service of the school without separate metering. Often time this process with PG&E is not practical given the relatively short duration of the project. GC's typically build the cost for PG&E into the job cost so the district still indirectly pays these costs.

•HCCI #9 – Contractor may connect to Main Campus switch. (2) 800 amp switches, (4) 400 amp switches (8) 225 amp switches, (2) 400 amp 3 phase and (2) 100 amp 3 phase are available (see attached location). Contractor shall be responsible for all means (labor and materials) of providing power to the jobsite from the power source however, they shall not include temporary power (PG&E) costs in their bid.

Jobsite water shall be obtained from fire hydrants using a meter obtained from the City of Madera. Contractor is responsible for all fees for water use. Construction restroom facilities shall be self-contained and supplied with water as needed by the Contractor's temporary restroom vendor.

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 11/4/21

Copy: ☐Owner ☐Inspector ☐Testing Lab ☐Structural ☐Mech. ☐Elec ☐File ☐Other Pages Attached: ____

REQUEST FOR INFORMATION

RFI No.: HCCI#010

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 10.18.2021

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: MTHS Stadium

INFORMATION REQUESTED: SWPPP Development

Please confirm it will be the responsibility of the GC to prepare the SWPPP plan for this project? Typically the District provides the plan and the GC implements and inspects.

RESPONSE:

General contractor to provide and execute
SWPPP as indicated in spec section 015723

Consultant's Signature: _____ Architect's Signature: _____

Date: _____ Date 10/29/2021

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: ____

REQUEST FOR INFORMATION

RFI No.: HCCI#011

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Attn: Matt Heiss

Date: 10.19.2021
Respond By:

Architect Project No.
Project: MTHS Stadium

INFORMATION REQUESTED: Soils Report

Please provide a copy of the Geotechnical Investigation for this project.

RESPONSE:
See attached Geo technical
report as requested

Consultant's Signature: _____ Architect's Signature: _____

Date: _____ Date 10/29/21

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: ____

GEOTECHNICAL INVESTIGATION REPORT
AND GEOLOGIC AND SEISMIC HAZARDS ASSESSMENT

TOROS STADIUM – MATILDA TORRES HS

BSK PROJECT NO. G20-170-11F

PREPARED FOR:

MADERA UNIFIED SCHOOL DISTRICT
1902 HOWARD ROAD
MADERA, CALIFORNIA 93637

SEPTEMBER 4, 2020

550 West Locust Avenue
Fresno CA 93650
P 559.497.2880
F 559.497.2886
www.bskassociates.com

September 4, 2020

BSK Project Number G20-170-11F

Ms. Rosalind Cox
Madera Unified School District
1902 Howard Road
Madera, California 93637

Subject: Geotechnical Engineering Investigation and
Geologic/Seismic Hazards Evaluation
Proposed Toros Stadium
Matilda Torres High School
1902 Howard Road, Madera, California

Dear Ms. Cox:

We are pleased to submit our geotechnical investigation report, and geologic and seismic hazards assessment for the proposed Toros Stadium at the Matilda Torres High School within the Madera Unified School District in Madera, California. The enclosed report presents our geotechnical engineering recommendations for the proposed improvements and our geologic and seismic hazards assessment included as Appendix C of this report.

Conclusions and recommendations presented in the enclosed report are based on our site investigation and laboratory testing program. Consequently, variations between anticipated and actual subsurface soil conditions may be found in localized areas during construction. If significant variation in the subsurface conditions is encountered during construction, BSK should review the recommendations presented herein and provide supplemental recommendations, if necessary.

Respectfully Submitted,
BSK Associates, Inc.

On Man Lau, PE, GE 2644
South Valley Regional Manager

Martin B. Cline, PG, CEG, QSD
Senior Geologist

Neva M. Popenoe, PE, GE
Geotechnical Group Manager

Table of Contents

Figures and Appendices

1. INTRODUCTION

This report presents the results of our geotechnical engineering investigation conducted by BSK Associates (BSK), for the proposed Toros Stadium at Matilda Torres High School within the Madera Unified School District in Madera, California. The site school facility is located on the 16645 Road 26, in Madera, CA, as shown on Boring Location Map, Figure 2. The geotechnical engineering investigation was conducted in accordance with BSK Proposal GF20-20689, dated July 31, 2020 and the Site Plan prepared by Darden Architects, dated March 13, 2020. A previous geotechnical investigation was performed at the high school (BSK Project No. G16-159-11F, dated September 16, 2016).

This report provides a description of the geotechnical conditions at the Site and provides specific recommendations for earthwork and foundation design with respect to the proposed improvements. In the event that changes occur in the design of the project, this report's conclusions and recommendations will not be considered valid unless the changes are reviewed with BSK and the conclusions and recommendations are modified or verified in writing. Examples of such changes would include location, size of structures, foundation loads, etc.

1.1 Project Description

We understand that this project consists of the design and construction of a new high school stadium at the Matilda Torres High School. The new stadium was reported to have plan areas as presented in Table 1. We assume the new stadium will be supported on conventional reinforced concrete foundations and slab-on-grade floors. Building design loads were not provided at the time this report was prepared, as such, we assume maximum wall and column loads are going to be less than 2 kips/ft and 30 kips, respectively. Other improvements are anticipated to include stadium seating, parking lots, main entrance gate, toilet building/snack bar, home control point, visitor control point, dual snack bar/restroom, field house and storage, scoreboard, underground utilities, hardscaping, and landscaping.

The following table summarizes the new proposed buildings and associated plan areas.

Table 1: Summarized Developments

Building Designation	Approximate Plan Area (sf)
L-Entry / Concession	1,900
M1-Toilet / Snack Bar	2,300
M2-Toilet / Snack Bar	2,300
P-Team Room	2,500
Q-Maintenance / Team Room	10,000

Fill elevations are anticipated to be less than 2 feet above natural grade, to achieve level building pad and

positive site drainage.

1.2 Approach and Scope of Services

The purpose of this investigation was to explore and evaluate the subsurface conditions at the project Site in order to provide geotechnical input for the design and construction of the planned improvements for this project. The scope of services is to adhere to the requirements of the 2019 California Building Standards Code (California Code of Regulations, Title 24), which consisted of field exploration, laboratory testing, engineering analysis, and preparation of this report. A geologic and seismic hazards assessment for the project was also performed concurrently in order to comply with the guidelines established by the California Geological Survey (CGS) in Note 48 and is presented in Appendix C. Based upon the above project understanding, BSK proposes the following scope of services that will include field exploration, field and laboratory testing program, engineering analyses, and report preparation.

2. SITE INVESTIGATION

2.1 Field Exploration

Prior to the field exploration, a site reconnaissance was completed by a BSK representative to mark exploratory boring locations on August 11,2020.

The field exploration for this investigation was conducted under the oversight of a BSK staff member. A total of six (6) exploratory borings were drilled at the Site on August 24, 2020 using a truck-mounted mobile B-61 drill rig with hollow stem augers provided by Baja Drilling Exploration. The borings were drilled to a maximum depth of 20 feet beneath the existing ground surface (bgs). Borings from the previous investigation referenced were utilized for this investigation and are included in Appendix A.

The soil materials encountered in the borings were visually classified in the field, and the logs were recorded during the drilling and sampling operations. Visual classification of the materials encountered in the borings were made in general accordance with the Unified Soil Classification System (ASTM D 2488). A soil classification chart is presented in Appendix A.

Boring logs are presented in Appendix A and should be consulted for more details concerning subsurface conditions. Stratification lines were approximated by the field staff based on observations made at the time of drilling, while the actual boundaries between soil types may be gradual and soil conditions may vary at other locations.

2.2 Laboratory Testing

Laboratory tests were performed on selected soil samples to evaluate moisture content, dry density, soil strength, particle gradation, and corrosion characteristics. A description of the laboratory test methods

and results are presented in Appendix B. Previous laboratory testing was utilized for this investigation and pertinent laboratory test results are included in Appendix B.

3. SITE CONDITIONS

3.1 Site Description

The Site is an existing high school facility located in the community of Madera, as shown on Figure 1. The school facility is bounded by Martin Street on the north, Road 26 on the west, residential to the south and existing middle and elmentary schools to the east. The stadium will consists of approximately six (6) main structures comprised of a Toilet Building/Snack Bar, Dual Snack Bar/Restroom, Field House and Storage, Team Room, Weight Room, and Maintenace Grounds building. The topography of the site is relatively flat with a slight change in grade of about one foot on the west end of campus and consists of typical landscaping of mature trees, bushes and lawn area. Gopher holes were scattered in unpaved areas.

3.2 Subsurface Conditions

The near surface soil consisted of fine to medium grained sandy clay, clayey sand, sandy silt, and silty sand at depths of between 2 and 6 feet bgs. The near surface soils were underlain by silty sand, poorly graded sand, clayey sand, sandy silt and sandy clay to the maximum depth of exploration (51.5 bgs.). A relatively weak to moderately cemented zone was encountered at depths of between 4 and 6 feet bgs. The relative density of the coarse-grained soils was very loose to very dense. The boring logs in Appendix A provide a more detailed description of the soils encountered in each boring, including the applicable Unified Soil Classification System symbols. The approximate locations of the soil borings are shown on the Boring Location Map (Figure 2).

Groundwater is discussed in Appendix C.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 General

Based on the results of our field investigation, it is our opinion that the proposed improvements are geotechnically feasible and that the Site may be developed as presently planned. These conclusions are based on the assumption that the recommendations presented in this report will be incorporated into the design and construction of this project. The planned building improvements may be supported on shallow reinforced isolated or continuous concrete spread footings. The stadium lighting improvements may be supported by pole-type foundations.

4.2 Site Preparation and Earthwork Construction

The following procedures must be implemented during site preparation for the proposed improvements.

It should be noted that references to maximum dry density, optimum moisture content, and relative compaction are based on ASTM: D1557 (latest test revision) laboratory test procedures.

1. Prior to any site grading, all miscellaneous surface obstructions must be removed from the improvement area. Near surface soils containing vegetation, roots, organics, or other objectionable material must be stripped to a depth of at least 3-inches to expose a clean soil surface. Where trees or bushes are to be removed, the associated roots are expected to extend 3 feet or more below existing grade, as such, deeper excavation may be necessary for root removal. Roots larger than ½-inch in diameter must be removed. Surface strippings must not be incorporated into engineered fill unless the organic content is less than 3 percent by weight (ASTM: D2974).

2. Within the area of the planned improvements, remove existing concrete curbs, hardscape, underground utilities, and debris to expose a clean soil surface free of deleterious material.

   Existing utilities or irrigation pipes must be removed to a point at least 5-feet horizontally outside the proposed building area. Resultant cavities must be backfilled with engineered fill. Abandoned pipelines to remain that are less than 2 inches in diameter must be capped at the cutoff point, while pipelines greater than 2 inches in diameter must be filled with a 1-sack sand-cement slurry.

3. Soil disturbed as a result of demolition, undocumented fill deemed to possess inadequate compaction or uniformity, debris, abandoned underground structures must be excavated to expose undisturbed native soil or suitable fill.

4. Following the required demolition, stripping, and/or removal of underground structures, the exposed soil surface in proposed improvement areas or areas to receive fill must be must be over-excavated uniformly to a minimum depth of 12 inches below existing site grade or below bottom of footing elevation, whichever is greater. Following the over-excavation, the exposed ground surface must be reviewed by the Geotechnical Engineer to evaluate if loose or soft zones are present that will require additional excavation.

   The over-excavation must extend at least 5 feet laterally beyond the outside edge of the proposed foundation or areas to receive fill, whichever distance is greater. The exposed subgrade must be proof-rolled under the observation of a BSK field representative to detect soft or pliant areas. Soft or pliant areas must be over-excavated to firm native soil. The exposed surface must be scarified at minimum of 8 inches, uniformly moisture conditioned to 2 percent above optimum moisture, and compacted to 90 percent relative compaction.

5. Excavated soils, free of deleterious substances (organic matter, demolition debris, tree roots, etc.) and with less than 3 percent organic content by weight, may be returned to the excavations as engineered fill. Engineered fill must be placed in uniform layers not exceeding 8-inches in loose thickness, moisture-conditioned to within 2 percent of optimum moisture content and compacted to at least 90 percent of the maximum dry density. The upper 12 inches of engineered fill placed as backfill under pavement sections must be compacted to at least 95 percent of the maximum dry

density. Acceptance of engineered fill placement must be based on both moisture content at time of compaction and relative compaction.

6. Imported fill materials must be free of deleterious substances and have less than 3 percent organic content by weight. The project specifications must require the contractor to contact BSK for review of the proposed import fill materials for conformance with these recommendations at least two weeks prior to importing to the site, whether from on-site or off-site borrow areas. Imported fill soils must be non-hazardous and be derived from a single, consistent soil type source conforming to the following criteria:

Maximum Particle Size:	3-inches
Percent Passing #4 Sieve:	65 – 100
Percent Passing #200 Sieve:	20 – 45
Plasticity Index:	less than 12
Expansion Index:	< 20
Low Corrosion Potential:	
Soluble Sulfates:	< 1,500 mg/kg
Soluble Chlorides:	< 300 mg/kg
Soil Resistivity:	> 5,000 ohm-cm

The Department of Toxic Substance Control (DTSC) has detailed guidelines for the testing of import soils to school sites. These guidelines take into account the past and present land usage at a borrow pit, the acreage of the borrow pit and the volume of import soil to establish the amount of chemical testing of import fill recommended. BSK must be contacted for review and analytical testing of proposed import fill materials for conformance with these recommendations at least 15 days prior to transporting fill to the site.

Grading operations must be scheduled as to avoid working during periods of inclement weather. Should these operations be performed during or shortly following periods of inclement weather or following irrigation, unstable soil conditions may result in the soils exhibiting a "pumping" condition. This condition is caused by excess moisture, in combination with compaction, resulting in saturation and near zero air voids in the soils. If this condition occurs, the affected soils must be over-excavated to the depth at which stable soils are encountered and replaced with suitable soils compacted as engineered fill. Alternatively, the Contractor may proceed with grading operations after utilizing a method to stabilize the soil subgrade, which must be subject to review by BSK prior to implementation.

4.3 Foundations

4.3.1 Shallow Footings

Based on our investigation, the loads for the proposed buildings can be supported by continuous perimeter footings and isolated interior footings bearing on native undisturbed soil or engineered fill

provided that the bottom of the footing excavations have been checked by a BSK representative. The recommended allowable soil bearing pressures in pounds per square foot (psf) are presented below.

FOOTING BEARING CAPACITY RECOMMENDATIONS			
Footing Type	**Allowable Bearing Pressure (psf)***	**Minimum Embedment (in)****	**Minimum Width (in)**
Continuous Footings	2,000 psf	24	18
Interior Footings	2,100 psf	12	24
* Pounds per square foot, dead plus live load. Includes factor of safety (FS) of at least 3.			
**Below lowest adjacent grade defined as bottom of slab on the interior and finish grade at the exterior.			

Allowable soil bearing pressures may be increased by one-third for transient loads such as wind and seismic loads. Where footings are located adjacent to below-grade structures or near major underground utilities, the footings should extend 9 inches below a 2H:1V (horizontal to vertical) plane projected upward from the structure footing or bottom of the underground utility to avoid surcharging the below grade structure and underground utility with building loads. Also, where utilities cross under the perimeter footings line and enter "interior" space, the trench backfill should consist of a vertical barrier of impervious type material as explained in the "Earthwork" section of this report. In addition, where utilities cross through footings, flexible waterproof caulking should be provided between the sleeve and the pipe. Utility plans should be reviewed by BSK prior to trenching for conformance to these requirements.

Concrete for footings should be placed neat against firm native soil or engineered fill. The footing excavations should not be allowed to dry before placing concrete. The footing excavations should be monitored by a representative of BSK for compliance with appropriate moisture control and to confirm the adequacy of the bearing materials. If soft or loose materials are encountered at the bottom of the footing excavations, they should be removed and replaced with lean concrete or engineered fill. BSK should also be present during the overexcavation. Unit prices for such overexcavation and backfilling should be obtained during contractor bidding for this project.

4.3.2 Lateral Earth Pressures and Frictional Resistance

Provided the site is prepared as recommended above, the following earth pressure parameters for footings may be used for design purposes. The parameters shown in the table below are for drained conditions of select engineered fill or properly compacted and moisture conditioned native soil.

Table 2: Recommended Static Lateral Earth Pressures for Footings	
Lateral Pressure Condition	**Equivalent Fluid Density (pcf) Drained**
Active Pressure	42
At Rest Pressure	64
Passive Pressure	350

The lateral earth pressures listed herein are obtained by the conventional equation for active, at rest, and passive conditions assuming level backfill and a bulk unit weight of 135 pcf for the site soils. A coefficient of friction of 0.62 may be used between soil sub-grade and the bottom of footings. The coefficient of friction and passive earth pressure values given above represent ultimate soil strength values.

BSK recommends that a safety factor consistent with the design conditions be included in their usage in accordance with Sections 1806A.3.1 through 1806A.3.3 of the 2019 CBC. For stability against lateral sliding that is resisted solely by the passive earth pressure against footings or friction along the bottom of footings, a minimum safety factor of 1.5 is recommended. For stability against lateral sliding that is resisted by combined passive pressure and frictional resistance, a minimum safety factor of 2.0 is recommended. For lateral stability against seismic loading conditions, a minimum safety factor of 1.2 is recommended.

4.3.3 Pole Type Foundations

Structures such as stadium lighting, signs, etc. may be supported on pole type foundations. This type of foundation must be designed in accordance with Section 1807A.3 of the 2019 CBC. However, it is recommended that an allowable lateral soil bearing pressure of 350 psf per foot of embedment be used to develop parameters S_1 and S_3 rather than one of the values given in Table 1806A.2. This value includes a factor of safety of 2 and may be increased as indicated by 1806A.3 and the footnotes to Table 1806A.2. Unless the area surrounding the pole foundation is paved or covered with concrete flatwork, the upper 24 inches of soil should be ignored when calculating the minimum depth of embedment.

The following table provides expressions for the allowable and ultimate axial capacity using friction to resist axial loads. The skin friction within the upper two feet of embedded length must be ignored in unpaved areas. The total settlement of pier foundations designed in accordance with these recommendations should not exceed one-half inch.

FRICTION RESISTANCE FOR VERTICAL LOADS	
Allowable (lbs)	**Ultimate (lbs)**
$50\ DL^2$	$125\ DL^2$

Note (1) – D is pile diameter (feet), and L is the total embedment length feet).

Prior to placing concrete, loose or disturbed soils must be removed from the bottom of the drilled pier excavations using a flat bottom clean-out bucket or other pre-approved method. A representative of BSK must observe the drilling and clean-out associated with the construction of pier foundations in order to assess whether the actual bearing conditions are compatible with the conditions anticipated during the preparation of this report. Relatively cohesionless soils were observed within boring B-46 at 15 feet bgs.

To aid in the excavation for pole footings, consideration should be given to utilizing casing or mud drilling techniques to prevent/minimize potential cavings.

Pier deflection may govern the design lateral resistance. If provided with pier geometry, lateral load, and loading eccentricity, the estimated pier head deflection can be provided.

5.4 Slabs-on-Grade

Non-structural concrete slab-on-grade must be a minimum of 4-inches thick and must be supported on a compacted subgrade prepared in accordance with the "Site Preparation and Earthwork Construction" section of this report. Existing onsite surface soils are considered to have a low expansion potential for design purposes. To regulate cracking of the slabs, construction joints and/or saw-cut control joints must be provided in each direction at a maximum spacing of 10 feet on centers along with steel reinforcement as recommended by the project's Structural Engineer. Control joints must have a minimum depth of one-quarter of the slab thickness. It is recommended that steel reinforcement used in concrete slabs-on-grade consist of steel rebar. Structural concrete slabs-on-grade may be designed using an unadjusted long-term Modulus of Subgrade Reaction (Ks) of 200 pounds per cubic inch (pci) constructed on a properly compacted subgrade or engineered fill. This value is based on the correlations to soil strength using one foot by one-foot plate-load tests and should therefore be scaled (adjusted) to the actual slab width. For sandy soils, such as those found at this site, the adjusted Ks value can be obtained by multiplying the value provided above by $[(B+B_1)/(2B)]^2$, where B is the slab width in feet and B_1 is 1 foot (width of a one foot by one foot plate-load test apparatus).

Interior concrete slabs must be successively underlain by: 1-½ inches of washed concrete sand; a durable vapor retarder; and a smooth, compacted subgrade surface. The vapor retarder must meet the requirements of ASTM: E1745 Class A and have a water vapor transmission rate (WVTR) of less than or equal to 0.012 Perms as tested by ASTM: E96. Examples of acceptable vapor retarder products include: Stego Wrap (15-mil) Vapor Barrier by STEGO INDUSTRIES LLC; W.R. Meadows Premoulded Membrane with Plasmatic Core; and Zero-Perm by Alumiseal. Because of the importance of the vapor barrier, joints must be carefully spliced and taped.

If migration of subgrade moisture through the slab is not a concern, then the vapor retarder and overlying sand may be omitted. The slab subgrade must be kept in a moist condition until the vapor retarder or concrete slab is placed. BSK's representative must be called to the site to review soil and moisture conditions immediately prior to placing the vapor barrier or concrete slab.

As indicated in the PCA Engineering Bulletin 119, Concrete Floors and Moisture, and applicable ACI Committee reports (see ACI 360R-06, Design of Slabs-on-Ground, dated October 2006 and ACI 302.1R-04, Guide for Concrete Floor and Slab Construction, dated June 2004), the sand layer between the vapor retarder and concrete floor slab may be omitted. The advantage of this option is that it can reduce the amount of moisture that can be transmitted through the slab (especially if the sand layer becomes moist

or wet prior to placing the concrete); however, the risk of slab "curling" is much greater. The "curling" may result from a sharp contrast in moisture-drying conditions between the exposed slab surface and the surface in contact with the membrane. As recommended in the referenced ACI Committee reports, measures must be taken to reduce the risk of "curling" such as reducing the joint spacing, using a low shrinkage mix design, and reinforcing the concrete slab. In order to regulate cracking of the slab, we recommend that full depth construction joints and control joints be provided in each direction with slab thickness and steel reinforcing recommended by the structural engineer.

Excessive landscape water or leaking utility lines could create elevated moisture conditions under concrete slabs, which could result in adverse moisture or mildew conditions in floor slabs or walls. Accordingly, care must be taken to avoid excess irrigation around the structures, as well as to periodically monitor for leaking utility lines. Likewise, positive surface drainage must be provided around the perimeter of the structures as discussed in the "Surface Drainage Control" section.

The adverse effects of moisture vapor transmission on flooring materials can be substantially reduced by the use of a low porosity concrete. This can be achieved by specifying a low water-cement ratio (0.45 or less by weight) a minimum compressive strength of 4,000 psi at 28 days, and a minimum of 7 days wet-curing.

5.5 Excavation Stability

Soils encountered within the upper 10-feet are generally Type C soil in accordance with OSHA (Occupational Safety and Health Administration). The slopes surrounding or along temporary excavations may be vertical for excavations that are less than 5-feet deep and exhibit no indication of potential caving, but must be no steeper than 1.5H:1V for excavations that are deeper than 5-feet, to a maximum depth of 10-feet. Temporary excavations for the project construction must be left open for as short a time as possible and must be protected from water runoff. Slope height, slope inclination, and excavation depths (including utility trench excavations) must in no case exceed those specified in local, state, or federal safety regulations (e.g., OSHA Health and Safety Standards for Excavations 29 CFR Part 1926, or successor regulations). These excavation recommendations are based on soil characteristics derived from the borings. Variations in soil conditions will likely be encountered during excavation. At the time of construction, BSK must be afforded the opportunity to observe and document sloping and shoring conditions, and the opportunity to provide review of actual field conditions to account for condition variations not otherwise anticipated in the preparation of these recommendations.

5.6 Utility Trench Excavation and Backfill

Pipes and conduits must be bedded and shaded in accordance with the requirements of the pipe manufacturer. Where no specific requirements exist, we recommend a minimum of 6-inches of sand bedding material for pipe installations 12 to 24-inches in diameter. For pipe diameters, smaller than 12-inches, the bedding thickness may be reduced to 4-inches. The bedding material and envelope (up to 6-

inches above the pipe) must consist of sand (Sand Equivalent greater than 30), be placed in loose lifts not exceeding 8-inches in thickness, compacted to at least 90 percent of the maximum dry density, and moisture conditioned to within 2 percent of optimum moisture content. Water jetting to attain compaction must not be allowed.

Adequate excavation width must be provided to permit uniform compaction on both sides of utility lines installed within the trench. The trench backfill material may consist of engineered fill. Trench backfill outside the building footprint must be placed in loose lifts not to exceed 8-inches in loose thickness, compacted to at least 90 percent of the maximum dry density, and moisture conditioned to within 2 percent of optimum moisture content. The upper 12-inches of trench backfill below pavement sections must be compacted to at least 95 percent of the maximum dry density. Conduits extending through or below footings must be "sleeved" as determined by the Project Structural Engineer. Utility trench backfill beneath the building areas must be backfilled in accordance with Section 4.3 (Site Preparation and Earthwork Construction).

5.7 Site Drainage

Proper site drainage is important for the long-term performance of the planned structure. The Site should be graded so as to carry surface water away from the building foundations. In addition, all roof gutters should be connected directly into the storm drainage system or drain onto impervious surfaces provided that a safety hazard is not created.

5.8 Corrosivity Results

A soil sample was collected during our field investigation in the upper 5 feet below the ground surface in boring B-44, and was submitted for corrosion testing. The sample was tested for, resistivity, chloride content, and sulfate content in accordance with ASTM test methods. The test results are presented at the end of Appendix B. Because we are not corrosion specialists, we recommend that a corrosion specialist be consulted for advice on proper corrosion protection for underground piping which will be in contact with the soils and other design details.

Based upon the resistivity measurements, the samples tested classified as "corrosive". It is recommended all buried iron, steel, cast iron, ductile iron, galvanized steel, and dielectric coated steel or iron be properly protected against corrosion depending upon the critical nature of the structure. It is recommended all buried metallic pressure piping, such as ductile iron firewater pipelines, should be protected against corrosion.

The above are general discussions. A more detailed investigation may include more or fewer concerns and should be directed by a corrosion expert. BSK does not practice corrosion engineering. Consideration should also be given to soils in contact with concrete that will be imported to the Site during construction, such as topsoil and landscaping materials. For instance, any imported soil materials should not be any

more corrosive than the on-site soils and should not be classified as being more corrosive than "moderately corrosive." Also, on-site cutting and filling may result in soils contacting concrete that were not anticipated at the time of this investigation.

5.9 Plan Review and Construction Observation

We recommend that BSK be retained by the Client to review the final foundation and grading plans and specifications before they go out to bid. It has been our experience that this review provides an opportunity to detect misinterpretation or misunderstandings prior to the start of construction.

Variations in soil types and conditions are possible and may be encountered during construction. To permit correlation between the soil data obtained during this investigation and the actual soil conditions encountered during construction, we recommend that BSK be retained to provide observation and testing services during site earthwork and foundation construction. This will allow us the opportunity to compare actual conditions exposed during construction with those encountered in our investigation and to provide supplemental recommendations if warranted by the exposed conditions. Earthwork should be performed in accordance with the recommendations presented in this report, or as recommended by BSK during construction. BSK should be notified at least two weeks prior to the start of construction and prior to when observation and testing services are needed.

6. ADDITIONAL SERVICES AND LIMITATIONS

Our services were performed in a manner consistent with that level of care and skill ordinarily exercised by other members of BSK's profession practicing in the same locality, under similar conditions and at the date the services are provided. Our conclusions, opinions and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. BSK makes no other representation, guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

This report may be used only by the District (Client) and the registered design professional in responsible charge and only for the purposes stated for this specific engagement within a reasonable time from its issuance, but in no event later than two (2) years from the date of the report.

Our services were performed based on project information provided by the Client. If the Client does not retain BSK to review any plans and specifications, including any revisions or modifications to the plans and specifications, BSK assumes no responsibility for the suitability or misinterpretation of our recommendations. In addition, if there are any changes in the field to the plans and specifications, the Client must obtain written approval from BSK's engineer that such changes do not affect our recommendations. Failure to do so will vitiate BSK's recommendations.

The scope of services was limited to drilling and sampling at the Site, laboratory testing, and preparation of this recommendations report. It should be recognized that definition and evaluation of subsurface conditions are difficult. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. The conclusions of this assessment are based on subsurface exploration including borings drilled to a maximum depth of 16.5 to 51.5 feet BGS, laboratory testing, and engineering analyses.

Recommendations contained in this report are based on our field observations and subsurface explorations, limited laboratory tests, and our present knowledge of the proposed construction. It is possible that soil or groundwater conditions could vary beyond the point explored. If soil or groundwater conditions are encountered during construction that differ from those described herein, the Client is responsible for ensuring that BSK is notified immediately so that we may re-evaluate the recommendations of this report. If the scope of the proposed construction, including the estimated structure loads, and the design depths or locations of the foundations, changes from that described in this report, the conclusions and recommendations contained in this report are not considered valid unless the changes are reviewed, and the conclusions of this report are modified or approved in writing, by BSK.

As the geotechnical engineering firm that performed the geotechnical evaluation for this project, BSK should be retained to confirm that the recommendations of this report are properly incorporated in the design of this project, and properly implemented during construction. This may avoid misinterpretation of the information by other parties and will allow us to review and modify our recommendations if variations in the soil conditions are encountered. As a minimum BSK should be retained to provide the following continuing services for the project:

- Review the project plans and specifications, including any revisions or modifications;
- Observe and evaluate the site earthwork operations to confirm subgrade soils are suitable for construction of foundations, slabs-on-grade, pavements and placement of engineered fill;
- Confirm engineered fill for the structures and other improvements is placed and compacted per the project specifications; and
- Observe shallow foundation and drilled pier excavations to confirm conditions are as anticipated.

The scope of services for this subsurface exploration and geotechnical report did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this Site.

This report, and any future addenda or reports regarding this Site, may be made available to bidders to supply them with only the data contained in the report regarding subsurface conditions and laboratory test results at the point and time noted. Bidders may not rely on interpretations, opinion, recommendations, or conclusions contained in the report. Because of the limited nature of any subsurface study, the contractor may encounter conditions during construction which differ from those presented in this report. In such event, the contractor should promptly notify the owner so that BSK's geotechnical

engineer can be contacted to confirm those conditions. We recommend the contractor describe the nature and extent of the differing conditions in writing and that the construction contract include provisions for dealing with differing conditions. Contingency funds should be reserved for potential problems that may arise during earthwork and foundation construction.

FIGURES

P:\FRS\Active\GEO\G2017011F - Toros Stadium at Matilda Torres HS\Graphics\G20-170-11F.dwg User:tgonzalez Plotted:Aug 13, 2020 - 2:16pm Last Save:Jun 24, 2020 - 8:45am

REFERENCE IMAGE: Google Earth

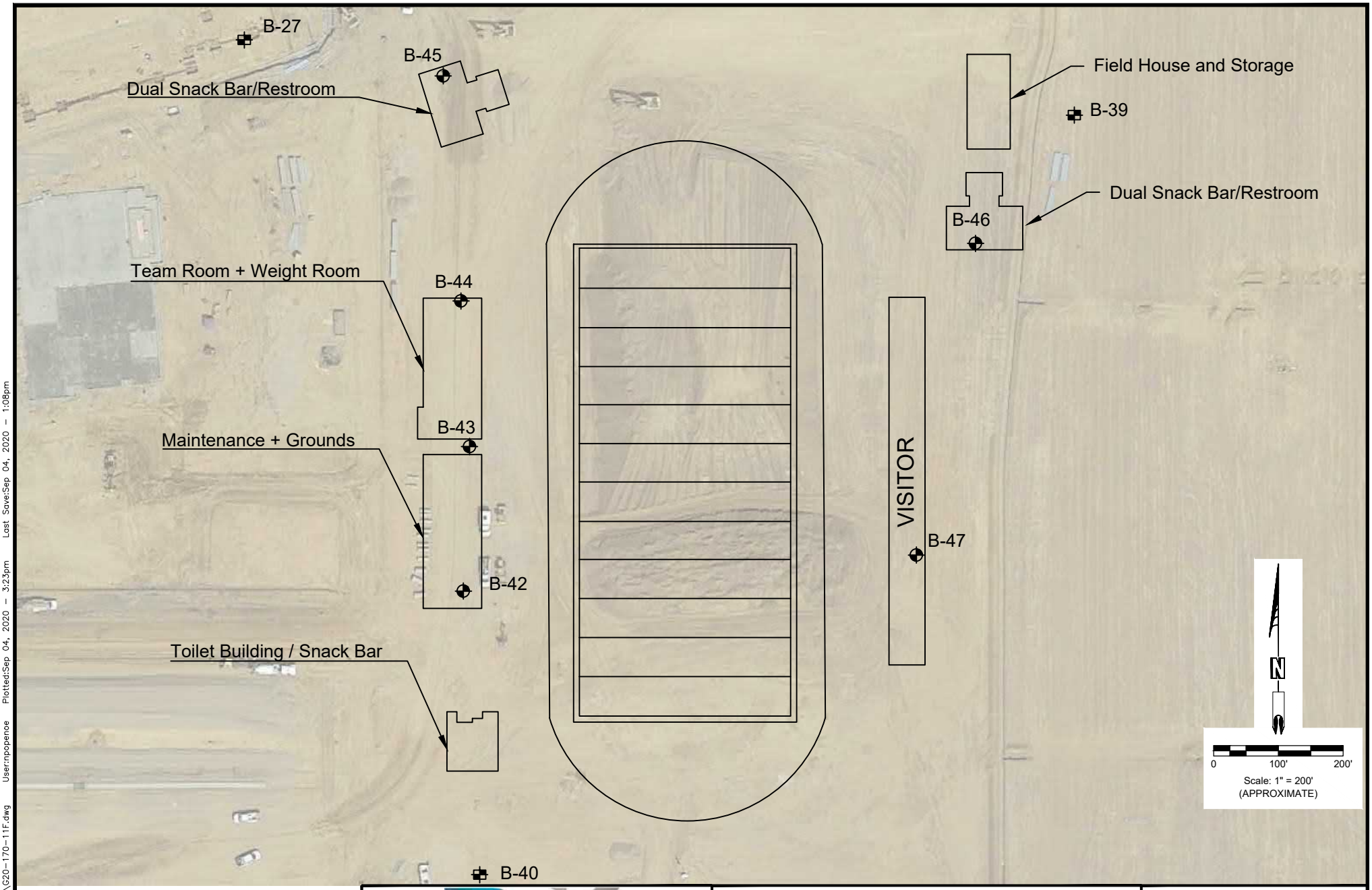
BSK ASSOCIATES
550 West Locust Avenue
Fresno, California 93650
Tel. (559) 497-2880

SITE VICINITY MAP

Toros Stadium
at Matilda Torres High School
SEC of Martin Street and Road 26
Madera, California

FIGURE 1

JOB NO. G20-170-11F
DATE August 13, 2020
DR. BY TG
CH. BY NP
SCALE AS SHOWN
SHEET NO. 1
OF 1 SHEETS



LEGEND:

B-47 APPROXIMATE BORING LOCATIONS CURRENT

B-40 APPROXIMATE BORING LOCATIONS (2016)

BSK ASSOCIATES
550 West Locust Avenue
Fresno, California 93650
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BORING LOCATION MAP

Toros Stadium
at Matilda Torres High School
SEC of Martin Street and Road 26
Madera, California

FIGURE 2

JOB NO. G20-170-11F
DATE September 4, 2020
DR. BY TG
CH. BY NP
SCALE AS SHOWN
SHEET NO. 1
OF 1 SHEETS

APPENDIX A
FIELD EXPLORATION

The field exploration, conducted on August 24, 2020 consisted of a site reconnaissance and drilling six (6) exploratory test borings. The test borings were drilled to depths of approximately 11.5 to 20 feet below ground surface (bgs). The test borings were drilled with a truck-mounted drill rig, equipped with 8-inch augers. The approximate location of the test boring is illustrated on Figure 2, Boring Location Map.

The soil materials encountered in the test borings were visually classified in the field and logs were recorded during the excavation and sampling operations. Visual classification of the materials encountered in the test borings were made in general accordance with the Unified Soil Classification System (ASTM D2487). A soil classification chart is presented herein. Boring logs are presented herein and should be consulted for more details concerning subsurface conditions.

Subsurface samples were obtained at the various depths shown on the boring logs by driving samplers which consisted of a 2.5-inch inside diameter (I.D.) lined with stainless sleeves and 1.4-inch I.D. Standard Penetration Test (SPT) sampler. The samplers were driven 18 inches using a 140-pound, automatic hammer dropping 30 inches. The number of blows required to drive the last 12 inches was recorded as the blow count (blows/foot) on the log of borings. The relatively undisturbed soil core samples were capped at both ends to preserve the samples at their natural moisture content. Disturbed soil samples were obtained using the Split-Spoon Sampler (marked X in logs) and were placed and sealed in polyethylene bags. At the completion of the field exploration, the test borings were backfilled with the soil cuttings, as set forth in BSK's proposal.

It should be noted that the use of terms such as "soft", "medium stiff", "very stiff" or "hard" to describe the consistency of a soil is based on sampler blow count and is not necessarily reflective of the in-place density or unit weight of the soils being sampled. The relationship between sampler blow count and consistency is provided in the following Tables A-1 and A-2 for coarse grained (sandy and gravelly) soils and fine grained (silty and clayey) soils, respectively.

Table A-1: Density of Coarse-Grained Soil versus Sampler Blow Count		
Consistency	**SPT Blow Count**	**2.5" I.D. Cal. Sampler**
Very Loose	<4	<6
Loose	4 – 10	6 – 15
Medium Dense	10 – 30	15 – 45
Dense	30 – 50	45 – 80
Very Dense	>50	>80

Table A-2: Consistency of Fine-Grained Soil versus Sampler Blow Count		
Consistency	**SPT Blow Count**	**2.5" I.D. Cal. Sampler**
Very Soft	<2	<3
Soft	2 – 4	3 – 6
Medium Stiff	4 – 8	6 – 12
Stiff	8 – 15	12 – 24
Very Stiff	15 – 30	24 – 45
Hard	>30	>45

MAJOR DIVISIONS				TYPICAL NAMES
COARSE GRAINED SOILS More than Half > #200 sieve	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW	WELL GRADED GRAVELS, GRAVEL-SAND MIXTURES
			GP	POORLY GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH OVER 15% FINES	GM	SILTY GRAVELS, POORLY GRADED GRAVEL-SAND-SILT MIXTURES
			GC	CLAYEY GRAVELS, POORLY GRADED GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES	SW	WELL GRADED SANDS, GRAVELLY SANDS
			SP	POORLY GRADED SANDS, GRAVELLY SANDS
		SANDS WITH OVER 15% FINES	SM	SILTY SANDS, POOORLY GRADED SAND-SILT MIXTURES
			SC	CLAYEY SANDS, POORLY GRADED SAND-CLAY MIXTURES
FINE GRAINED SOILS More than Half < #200 sieve	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS, OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL	ORGANIC CLAYS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			Pt	PEAT AND OTHER HIGHLY ORGANIC SOILS

■	Modified California	RV	R-Value
⊠	Standard Penetration Test (SPT)	SA	Sieve Analysis
☒	Split Spoon	SW	Swell Test
◪	Pushed Shelby Tube	TC	Cyclic Triaxial
▯	Auger Cuttings	TX	Unconsolidated Undrained Triaxial
✋	Grab Sample	TV	Torvane Shear
⊘	Sample Attempt with No Recovery	UC	Unconfined Compression
CA	Chemical Analysis	(1.2)	(Shear Strength, ksf)
CN	Consolidation	WA	Wash Analysis
CP	Compaction	(20)	(with % Passing No. 200 Sieve)
DS	Direct Shear	▽	Water Level at Time of Drilling
PM	Permeability	▼	Water Level after Drilling(with date measured)
PP	Pocket Penetrometer		

SOIL CLASSIFICATION CHART AND LOG KEY

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Location: 16645 Road 26, Madera, CA

Project No.: G20-170-11F

Logged By: J. Lue

Checked By: N. Popenoe

Boring: **B-42**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–5			55	123.0	10.8			SM	**Silty SAND** - brown, moist, fine to medium grained, trace clay	
5–6									... less clay	
6–9			65							
9–15			89					SM	**Silty SAND with Gravel** - brown, moist, fine to coarse grained gravel	
15–16			51					SM	**Silty SAND** - brown, moist, fine to medium grained sand	
16–24									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: CME 75
Drilling Equipment: Hollow Stem Auger
Date Started: 8/24/20
Date Completed: 8/24/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Location: 16645 Road 26, Madera, CA

Project No.: G20-170-11F

Logged By: J. Lue

Checked By: N. Popenoe

Boring: **B-43**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–8								SM	**Silty SAND** - brown, moist, fine to medium grained sand, strong cement	
3			98	119.3	6.9					
6			50							
9–17								SC	**Clayey SAND** - brown, moist, fine to medium grained sand, medium plastic	
11			50							
18–19								SM	**Silty SAND** - brown, moist, fine to medium grained sand, weakly cement	
20			18						Boring terminated at approximately 20 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: CME 75
Drilling Equipment: Hollow Stem Auger
Date Started: 8/24/20
Date Completed: 8/24/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 20 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Location: 16645 Road 26, Madera, CA

Project No.: G20-170-11F

Logged By: J. Lue

Checked By: N. Popenoe

Boring: **B-44**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–24								SM	**Silty SAND** - brown, moist, fine to coarse grained	
3	■		69	117.8	6.1					
5	■		44						... trace clay, weakly cemented	
10	■		30					SM	**Silty SAND** - brown, moist, fine to medium grained, weakly cemented	
11.5									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: CME 75
Drilling Equipment: Hollow Stem Auger
Date Started: 8/24/20
Date Completed: 8/24/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Project: Matilda Torres HS Stadium

Location: 16645 Road 26, Madera, CA

Project No.: G20-170-11F

Logged By: J. Lue

Checked By: N. Popenoe

Boring: **B-45**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1–4								SM	**Silty SAND** - brown, moist, fine to medium grained, trace clay	
3			86	122.2	9.3					
5–9								SC	**Clayey SAND** - brown, moist, fine to medium grained, medium plastic	
6			89							
10–11								SM	**Silty SAND** - brown, moist, fine to medium grained, trace clay, weakly cemented	
11			46							
12–24									Boring terminated at approximately 11.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	

Drilling Contractor: Baja Exploration
Drilling Method: CME 75
Drilling Equipment: Hollow Stem Auger
Date Started: 8/24/20
Date Completed: 8/24/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 11.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Location: 16645 Road 26, Madera, CA

Project No.: G20-170-11F

Logged By: J. Lue

Checked By: N. Popenoe

Boring: **B-46**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, moist, fine to medium grained, trace clay	
2										
3			43	110.5	9.7					
4										
5									... weakly cemented	
6			15							
7										
8										
9										
10									... strongly cemented	
11			83							
12										
13										
14										
15								SP-SM	**Poorly Graded SAND with Silt** - brown, moist, fine to coarse grained sand	
16			10							
17									Boring terminated at approximately 16.5 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: CME 75
Drilling Equipment: Hollow Stem Auger
Date Started: 8/24/20
Date Completed: 8/24/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

GEO_BORING LOGS.GPJ_BSK.GDT 9/3/20

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Project: Matilda Torres HS Stadium

Location: 16645 Road 26, Madera, CA

Project No.: G20-170-11F

Logged By: J. Lue

Checked By: N. Popenoe

Boring: **B-47**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1								SM	**Silty SAND** - brown, moist, fine to coarse grained	
2										
3			18	110.9	10.2					
4										
5									... weakly cemented, trace asphalt, black sand	
6			61							
7										
8										
9										
10									... fine to medium grained sand	
11			41							
12										
13										
14										
15									... fine to coarse grained sand	
16			60						Boring terminated at approximately 15 feet bgs. No groundwater encountered. Boring backfilled with soil cuttings.	
17										
18										
19										
20										
21										
22										
23										
24										

Drilling Contractor: Baja Exploration
Drilling Method: CME 75
Drilling Equipment: Hollow Stem Auger
Date Started: 8/24/20
Date Completed: 8/24/20

Surface Elevation:
Sample Method: 2.5" I.D. Cal Mod & 1.5" I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 16.5 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Location: Madera, CA

Project No.: G16-159-11F

Logged By: J. Coburn

Checked By: S. Demmers

Boring: **B- 8**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1	■		63	117.2	6.1			SM	**Silty SAND** - orange brown, moist, dense, fine to medium grained	
2										
3										
4										
5	⊠		50/ 6"			38		SC	**Clayey SAND** - orange brown, moist, very dense, fine to medium grained	
6										
7										
8										
9										
10	■		65	128.7	8.6					
11										
12										
13										
14										
15	⊠		35					SM	**Silty SAND** - light brown, moist, dense, fine to medium grained	
16										
17										
18										
19										
20	■		50	115.5	7.5				. . . yellow brown, fine grained	
21										
22										
23										
24								CL-ML	**Silty CLAY** - light brown, moist, hard, low plasticity	
25	⊠		30							
26										
27										
28										
29										

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile 61
Date Started: 8/30/16
Date Completed: 8/30/16

Surface Elevation:
Sample Method: 2.5-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 50 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Project: Madera New High School

Location: Madera, CA

Project No.: G16-159-11F

Logged By: J. Coburn

Checked By: S. Demmers

Boring: **B- 8**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
31			52					SM	**Silty SAND** - light brown, moist, dense, fine to medium grained *(continued)*	
34								ML	**SILT** - light brown, moist, very stiff	
35			16							
40			55	114.2	6.3			SP-SM	**Poorly Graded SAND** - yellow brown, moist, dense, fine to medium grained	
45			12					CL-ML	**Silty CLAY** - green grey, moist, stiff	
48								SM	**Silty SAND** - light brown, moist, medium dense, fine to medium grained	
50			28	87.1	35.9			ML	**Clayey SILT** - green grey, moist, very stiff	
51									Boring terminated at approximately 51.5 feet bgs Boring backfilled with soil cuttings No groundwater encountered	

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile 61
Date Started: 8/30/16
Date Completed: 8/30/16

Surface Elevation:
Sample Method: 2.5-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 50 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Project: Madera New High School

Location: Madera, CA

Project No.: G16-159-11F

Logged By: J. Coburn

Checked By: S. Demmers

Boring: **B-27**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1			50/ 3"					SM	**Silty SAND** - orange brown, moist, very dense, fine to medium grained	
5			57						. . . moderately cemented	
10			50/ 3"							
14								SP-SM	**Poorly Graded SAND** - yellow brown, moist, dense, fine to medium grained, with silt	
15			30							
20			31							
22									Boring terminated at approximately 21.5 feet bgs Borehole backfilled with soil cuttings No groundwater encountered	

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile 61
Date Started: 8/30/16
Date Completed: 8/30/16

Surface Elevation:
Sample Method: 2.5-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 20 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Project: Madera New High School

Location: Madera, CA

Project No.: G16-159-11F

Logged By: J. Coburn

Checked By: S. Demmers

Boring: **B-39**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1	■		45	116.7	4.2			SC	**Clayey SAND** - light red brown, moist, fine to medium grained ...very stiff	
2										
3										
4										
5	⊠									
6			80						...weak cementation, hard	
7										
8										
9										
10	■									
11			50/ 3"	112.4	10.1				...moderate cementation	
12										
13										
14										
15	⊠									
16			55						...	
17									Boring terminated at approximately 16.5 feet bgs Borehole backfilled with soil cuttings No groundwater encountered	
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile 61
Date Started: 9/1/16
Date Completed: 9/1/16

Surface Elevation:
Sample Method: 2.5-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 15 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

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Project: Madera New High School

Location: Madera, CA

Project No.: G16-159-11F

Logged By: J. Coburn

Checked By: S. Demmers

Boring: **B-40**

Depth (Feet)	Samples	Bulk Samples	Penetration Blows / Foot	In-Situ Dry Density (pcf)	In-Situ Moisture Content (%)	% Passing No. 200 Sieve	Graphic Log	USCS	MATERIAL DESCRIPTION	REMARKS
1			74					SC	**Clayey SAND** - light brown, moist, fine to medium grained ...dense	
2										
3										
4								CL	**Sandy CLAY** - dark red brown, moist, fine grained sand	
5										
6			26						...very stiff	
7										
8										
9										
10									...brown, hard	
11			46							
12										
13										
14								SM	**Silty SAND** - brown, fine grained, moist, trace of clay	
15										
16			42						...medium dense	
17										
18									Boring terminated at approximately 16.5 feet bgs Borehole backfilled with soil cuttings No groundwater encountered	
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										

Drilling Contractor: Dave's Drilling
Drilling Method: Hollow Stem Auger
Drilling Equipment: Mobile 61
Date Started: 9/1/16
Date Completed: 9/1/16

Surface Elevation:
Sample Method: 2.5-inch I.D. Modified & 1.5-inch I.D. SPT Split Spoon
Groundwater Depth: Not Encountered
Completion Depth: 15 Feet
Borehole Diameter: 8"

* See key sheet for symbols and abbreviations used above.

APPENDIX B

LABORATORY TESTING

APPENDIX B

LABORATORY TESTING RESULTS

Moisture-Density Tests

The field moisture content, as a percentage of dry weight of the soils, was determined by weighing the samples before and after oven drying in accordance with ASTM D2216 test procedures. Dry densities, in pounds per cubic foot, were also determined for undisturbed core samples in general accordance with ASTM D 2937 test procedures. Test results are presented on the boring logs in Appendix A.

Direct Shear Test

One (1) Direct Shear Test was performed on a relatively undisturbed soil samples obtained at the time of drilling in the area of planned construction. The tests were conducted to determine the soil strength characteristics. The standard test method is ASTM D3080, Direct Shear Test for Soil under Consolidated Drained Conditions. The direct shear test results are presented graphically on Figure B-1.

Soil Corrosivity

One (1) Corrosivity Evaluation was performed on a bulk soil sample obtained at the time of drilling in the area of planned construction. The soil was evaluated for pH and minimum resistivity (CT 643), sulfate ion concentration (CT 417), and chloride ion concentration (CT 422). The test results are presented in Table B-1.

Table B-1: Summary of Corrosion Test Results

Sample Location	pH	Sulfate, ppm	Chloride, ppm	Minimum Resistivity, ohm-cm
B-1 @ 0-5 feet bgs	5.8	19.0	13.0	2,460
B-23 @ 0-5 feet bgs	6.4	30.0	19.0	3,480
B-44 @ 0-5 feet bgs	8.3	19	6.3	-

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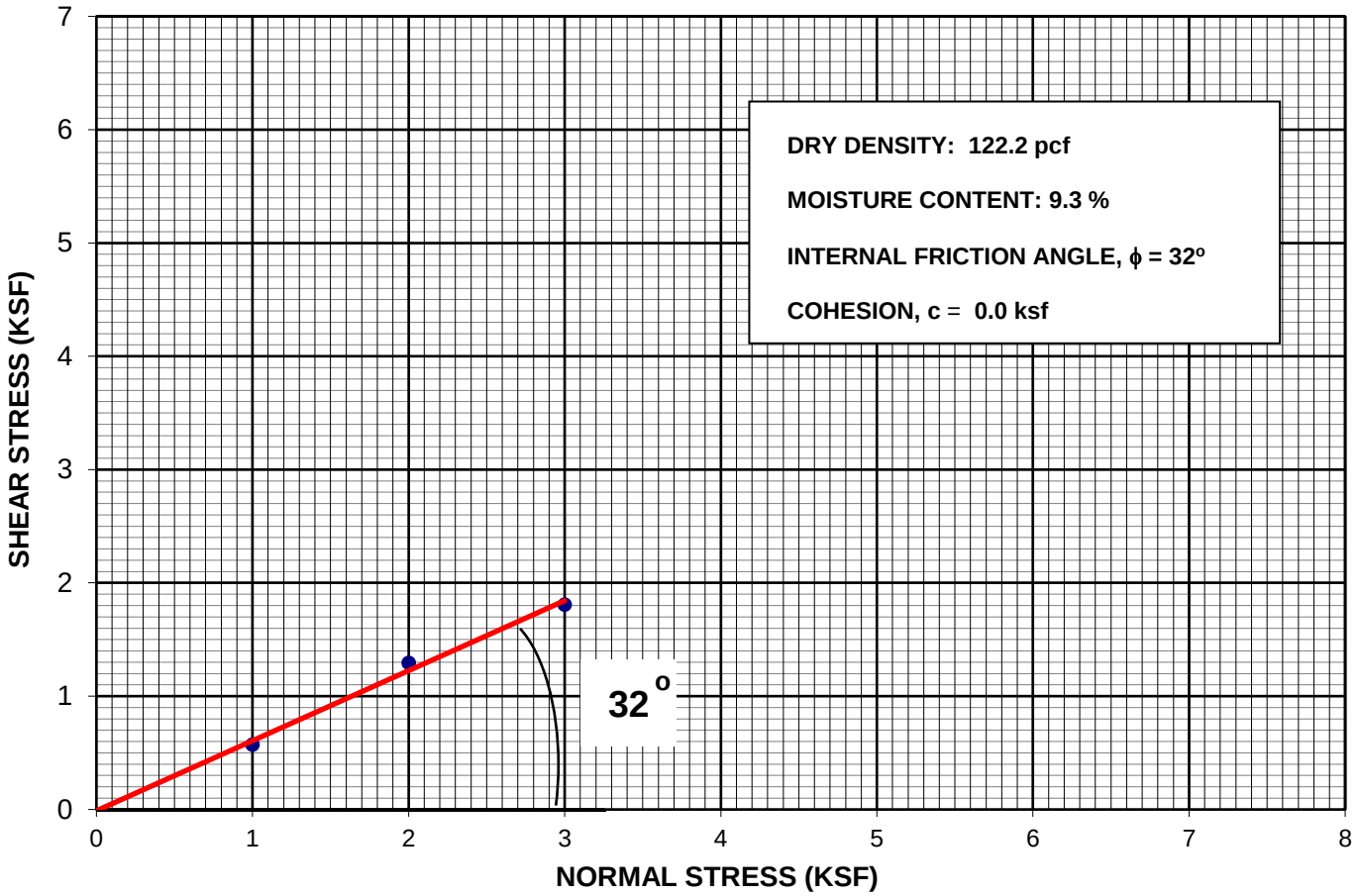
Direct Shear Test

ASTM D-3080

FIGURE B-1

Project Name:	Matilda Torres HS - New Stadium	**Sampled By:**	J. Leu	**Sample Date:**	8/24/2020
		Tested By:	D.Messfin	**Test Date:**	9/3/2020
Project Number:	G20-170-11F	**Lab Tracking ID:**	N/A	**Report Date:**	9/4/2020
Sample Location:	B-45 @ 2'	**Sample Description:**	Silty Sand (SM) - brown, moist, fine to medium grained, trace clay		

SHEAR STRENGTH DIAGRAM



APPENDIX C

GEOLOGIC AND SEISMIC HAZARDS ASSESSMENT

APPENDIX C
GEOLOGIC AND SEISMIC HAZARDS ASSESSMENT REPORT
NEW MADERA HIGH SCHOOL STADIUM
MADERA, CALIFORNIA

Table of Contents

Figures

C1. INTRODUCTION

This report presents the geologic and seismic hazards assessment prepared in accordance with the 2019 California Building Code (CBC), CCR Title 24, Chapters 16A and 18A requirements for a Geotechnical/Engineering Geologic Report. The assessment was performed in conformance with California Geological Survey (CGS) Note 48 (2019).

C1.1 Purpose and Scope of Services

The purpose of the geologic and seismic hazards assessment is to provide the Client with an evaluation of potential geologic or seismic hazards which may be present at the site or due to regional influences. This report is an update of BSK's 2016 report and is intendent to include the new stadium area. BSK's scope of services for this assessment included the following:

1. Review of published geologic literature, and current and past investigations at the site;
2. Evaluation of the data collected and preparation of geologic cross sections;
3. Evaluation of potential geologic hazards affecting the site;
4. Determination of Site Class and seismic design parameters.

The observations and conclusions presented in this report specifically exclude the assessment of environmental characteristics, particularly those involving hazardous substances, and a high-pressure pipeline risk evaluation.

C1.2 Site Location

The site is located at the southeast intersection of Martin Street and Road 26 in Madera, Madera County, California.
The site coordinates of the new stadium are:

Latitude 36.9903ºN
Longitude 120.0699ºW

The surrounding area is primarily rural residential with some farmland. The adjacent properties surrounding the Site are mostly residential with the existing Jack G. Desmond Middle School located east of the Site.

C1.3 Site Topography

As shown on Figure C-1, the site and surrounding area topography is relatively flat with a ground surface elevation of 275 feet at the southwest portion of the Site, to 280 feet in the northeast portion of the Site, USGS datum (NAVD27). Based on data from the USGS National Elevation Dataset, the site elevation referenced to a more current elevation datum (NAVD88) is approximately 276 feet at the southwest portion of the Site, to 284 feet in the northeast portion of the Site.

C1.4 Groundwater Conditions

The Site is within the Madera sub-basin of the San Joaquin Basin Hydrologic Study Area. This includes approximately the southern two-thirds of the Great Valley. Within the Study Area, 39 groundwater basins and areas of potential storage have been identified. The boundaries of these areas are based largely on hydrologic as well as political considerations.

Groundwater was not observed at the time of our borings were drilled to depths of 51.5 feet bgs. Due to the brief time the borehole was left open, this may not represent a fully stabilized groundwater condition. Please note that the groundwater level may fluctuate both seasonal and from year to year due to variations in rainfall, temperature, pumping from wells and possibly as the result of other factors that were not evident at the time of our investigation.

To ascertain groundwater levels for the area during other time periods, groundwater elevation data from the California Department of Water Resources (DWR) were obtained for the period 1945 to 2010. The water level hydrograph from well 11S17E02Q001M is presented on Figure C-2. The hydrograph indicates that the shallowest historic depth to groundwater in the general area of the site was approximately 51 feet bgs (1945).

C2.0 GEOLOGIC SETTING

The site is located in the Great Valley geomorphic province. The site is located in the structural region identified by the U.S.G.S. (Bartow, 1991) as the San Joaquin Valley portion of the southern Sierran block. This area forms a broad syncline with deposits of marine and overlying continental sediments, Jurassic to Holocene in age. The thickness of the sediments increases to the west and reach a thickness of as much as 20,000-feet on the west side of the San Joaquin Valley syncline. East of the site, the relatively flat geomorphology transitions into the foothills of Sierra Nevada, which generally consist of pre-Cretaceous metamorphic rocks, Mesozoic ultramafic rocks, and Mesozoic granitic rocks.

As shown on Figure C-4, the site is on Pleistocene nonmarine deposits which are the result of the development of older alluvial fans from the Sierra Nevada Mountains to the east.

Nearby significant active faults include the Great Valley Fault located approximately 39 miles west of the site and the San Andreas Fault located approximately 66 miles west of the Site.

C2.1 Subsurface Conditions

Subsurface conditions are described in the 2016 geotechnical investigation report prepared by BSK Associates (BSK) and to which this geologic and seismic hazards report is appended. As shown on Figure C-3, the site was the subject of a 2016 field investigation of 41 soil borings completed to 51.5 feet bgs and an August 2020 field investigation of 5 additional soil borings in the stadium area. The underlying stratigraphy consists of mostly clayey/silty sand and sandy silt to depths of 8 to 14 feet bgs. Below this to a layers of sand, silty sand, silty clay and silt was encountered. Figure C-5 presents geologic cross sections showing the current site surface topography and the subsurface conditions inferred the soil borings completed at the site.

C3.0 GEOLOGIC/SEISMIC HAZARDS

The types of geologic and seismic hazards assessed include surface ground fault rupture, liquefaction, seismically induced settlement, slope failure, flood hazards and inundation hazards.

C3.1 Fault Rupture Hazard Zones in California

The purpose of the Alquist-Priolo Geologic Hazards Zones Act, as summarized in CDMG Special Publication 42 (SP 42), is to "prohibit the location of most structures for human occupancy across the traces of active faults and to mitigate thereby the hazard of fault-rupture." As indicated by SP 42, "the State Geologist is required to delineate "earthquake fault zones" (EFZs) along known active faults in California. Cities and counties affected by the zones must regulate certain development 'projects' within the zones. They must withhold development permits for sites within the zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

The Site is not located in a Fault-Rupture Hazard Zone. The closest Fault-Rupture Hazard Zone is associated with the Ortigalita Fault, approximately 47 miles west of the Site.

C3.2 State of California Seismic Hazard Zones (Liquefaction and Landslides)

Zones of Required Investigation referred to as "Seismic Hazard Zones" (SHZ) in CCR Article 10, Section 3722, are areas shown on Seismic Hazard Zone Maps where site investigations are required to determine the need for mitigation of potential liquefaction and/or earthquake-induced landslide ground displacements.

The site is within the Madera 7.5 Minute Quadrangle and there are no mapped areas that have Seismic Hazard Zones in the project area.

C3.3 Slope Stability and Potential for Slope Failure

The project area is essentially flat and the potential hazard due to landslides from adjacent properties is not applicable.

C3.4 Flood and Inundation Hazards

An evaluation of flooding at the site includes review of potential hazards from flooding during periods of heavy precipitation and flooding due to a catastrophic dam breach from up-gradient surface impoundments.

C3.4.1 Flood Hazards

Federal Emergency Management Agency (FEMA) flood hazard data was obtained to present information regarding the potential for flooding at the Site. As shown on Figure C-6 according to FEMA D-Firm GIS data, dated 9/26/2016, the Site lies in Zone X area of minimal flooding, outside the 100-year and 500-year floodplains.

C3.4.2 Inundation Hazards - Dams

As shown on Figure C-6, the Site is located in the pathway of inundation from a catastrophic breach of Hensley Lake/Hidden Dam Inundation. (Dam Inundation GIS data from California Emergency Management Agency, dated 2013)

C3.5 Volcanic Hazards

According to USGS Bulletin 1847, dated 1989, the site is not located in an area which would be subject to hazards from volcanic eruptions (Miller, 1989).

C3.6 Corrosion

Please refer to the section titled “Corrosion Assessment” in the geotechnical report for discussion of the corrosivity of the site soils.

C3.7 Expansive Soils

As discussed in the geotechnical report, the near-surface soil have a very low to expansion potential.

C3.8 Land Subsidence

Four types of subsidence are known to occur in the San Joaquin Valley (Galloway, 1999). In order of decreasing magnitude they are:

(1) Subsidence caused by aquifer system compaction due to the lowering of ground-water levels by sustained ground-water overdraft;
(2) Subsidence caused by the hydrocompaction of moisture-deficient deposits above the water table;
(3) Subsidence related to fluid withdrawal from oil and gas fields; and
(4) Subsidence related to crustal neotectonic movements.

The site is not located in an area known to be susceptible to subsidence due to petroleum or groundwater withdrawal. The site is not located in an area in which soils are known to be impacted by hydrocompaction.

C4. SEISMIC HAZARD ASSESSMENT

C4.1 Seismic Source Deaggregation

Figures C-7 presents fault maps showing the major faults that may impact the site in the future. Seismically induced ground motion at a site can be caused by earthquakes on any of the sources surrounding the site. Deaggregation of the seismic hazard was performed by using the USGS Interactive Deaggregation website. The deaggregation determination, at the maximum considered earthquake (MCE) hazard level, results in distance, magnitude and epsilon (ground-motion uncertainty) for each source that contributes to the hazard. Each source has a corresponding epsilon, which is the probabilistic value relative to the mean value of ground motion for that source.

Table C-1 below lists the result of deaggregation based on a probabilistic model developed by the USGS. The most extreme seismic source with the highest magnitude that contributes to the peak ground acceleration (PGA) is a magnitude 8.14 earthquake from the San Andreas fault. For liquefaction and seismic settlement, the modal magnitude (Mw) of 5.5 would be appropriate for probabilistic input parameter that is consistent with the design earthquake ground motion.

TABLE C-1
SEISMIC HAZARD DEAGGREGATION
MAXIMUM CONSIDERED EARTHQUAKE

Seismic Source	Percent Contribution	Distance (km)	Magnitude (Mw)	Epsilon (Mean Values)
PGA Deaggregation (USGS 2008)				
CA Compr. crustal gridded	90	-	6.02	-
San Andreas Fault	2.6	105	8.14	2.16
Mean	-	18.2	6.18	1.08
Modal	9	10.4	5.5	0.89

Table C-2 provides the location, earthquake magnitude, site to earthquake distances, dates and the resulting site peak horizontal acceleration for the period 1800 to 2016. Figure C-6 presents historical earthquake magnitudes and locations relative to the site.

The Table C-2 shows that the site has experienced mean plus one sigma peak horizontal acceleration up to 0.29g from a 4.6 magnitude earthquake on a local unknown fault. In general the site has been subjected to relatively low intensity ground motion, primarily from large earthquakes on distance faults and low magnitude earthquakes closer to the site.

TABLE C-2
HISTORIC EARTHQUAKES WITHIN 100 MILES OF THE SITE
GROUND MOTION GREATER THAN 0.05G

File Code	Latitude (North)	Longitude (West)	Date	Depth (km)	Earthquake Magnitude	Site Acceleration (g)	Distance mi (km)
MGI	37.000	120.070	9/12/1928	0	4.6	0.29	0.7(1.1)
BRK	36.220	120.290	5/2/1983	0	6.7	0.10	54.6(87.8)
T-A	36.830	121.570	10/18/180	0	7.0	0.09	83.5(134.5)
BRK	36.220	120.400	7/22/1983	0	6.0	0.07	56.2(90.5)
DMG	36.400	121.000	04/12/188	0	6.2	0.07	65.7(105.7)
PAS	37.556	118.791	5/25/1980	6.4	6.5	0.07	80.4(129.4)
PAS	37.464	118.823	5/27/1980	2.4	6.3	0.07	75.9(122.2)
PAS	37.608	118.821	5/25/1980	3.7	6.4	0.07	80.8(130.0)
DMG	35.750	120.250	3/10/1922	0	6.5	0.07	86.2(138.7)
DMG	37.500	118.500	04/11/187	0	6.6	0.07	93.2(150.0)
DMG	37.250	121.750	7/1/1911	0	6.6	0.06	94.2(151.6)
PAS	36.151	120.049	8/4/1985	6	5.8	0.06	58.0(93.3)
PAS	36.286	120.413	10/25/198	6	5.6	0.06	52.2(84.0)
DMG	37.000	121.500	06/20/189	0	6.2	0.06	78.9(126.9)
BRK	36.220	120.290	5/2/1983	0	5.6	0.06	54.6(87.8)
T-A	36.750	119.750	08/16/186	0	4.3	0.06	24.2(39.0)
DMG	36.900	121.200	03/06/188	0	5.7	0.06	62.7(100.8)
PAS	37.470	118.597	11/23/198	6	6.2	0.06	87.6(141.0)

C4.3 Earthquake Ground Motion, 2019 California Building Code

C4.3.1 Site Class

Based on Section 1613A.2.2 of the 2019 California Building Code (CBC), the Site shall be classified as Site Class A, B, C, D, E or F based on the Site soil properties and in accordance with Chapter 20 of ASCE 7-16. Based on the soil condition at depth encountered from previous reports, the Site is Class D (15< N < 50).

C4.3.2 Seismic Design Criteria

The 2019 California Building Code (CBC) utilizes ground motion based on the Risk-Targeted Maximum Considered Earthquake (MCE_R) that is define in the 2019 CBC as the most severe earthquake effects

considered by this code, determined for the orientation that results in the largest maximum response to horizontal ground motions and with adjustment for targeted risk. Ground motion parameters in the 2019 CBC are based on ASCE 7-10, Chapter 11.

The United States Geologic Survey (USGS) has prepared maps presenting the Risk-Targeted MCE spectral acceleration (5% damping) for periods of 0.2 seconds (S_S) and 1.0 seconds (S_1). The values of S_S and S_1 can be obtained from the OSHPD Seismic Design Maps Application available at:
https://seismicmaps.org/

Table C-3 below presents the spectral acceleration parameters produced for Site Class D by the USGS Ground Motion Parameter Application and Chapter 16 of the 2019 CBC based on ASCE 7-16.

TABLE C-3
SPECTRAL ACCELERATION PARAMETERS
RISK TARGETED MAXIMUM CONSIDERED EARTHQUAKE

Criteria	Value		Reference
MCE Mapped Spectral Acceleration (g)	S_S = 0.581	S_1 = 0.230	USGS Mapped Value
Site Coefficients (Site Class D)	F_a = 1.335	F_v = Null[1](2.15)[2]	ASCE Table 11.4
Site Adjusted MCE Spectral Acceleration (g)	S_{MS} = 0.773	S_{M1} = Null[1](0.495)[2]	ASCE Equations 11.4.1-2
Design Spectral Acceleration (g)	S_{DS} = 0.517	S_{D1} = Null[1](0.330)[2]	ASCE Equations 11.4.3-4
Site Short Period - T_S (Seconds)	Ts = 0.638		Ts = S_{D1}/ S_{DS}
Site Long-Period - T_L (Seconds)	T_L = 12		USGS Mapped Value

[1] Requires site-specific ground motion procedure or exception as per ASCE 7-16 Section 11.4.8
[2] Values from ASCE 7-16 supplement, shall only be used to calculate Ts

C4.3.3 Geometric Mean Peak Ground Acceleration

As per Section 1803A.5.12 of the CBC, peak ground acceleration (PGA) utilized for dynamic lateral earth pressures and liquefaction, shall be based on a site-specific study (ASCE 7-16, Section 21.5) or ASCE 7-16, Section 11.8.3. The USGS Ground Motion Parameter Application based on ASCE 7-16, Section 11.8.3 produced the values shown in Table C-4 based on Site Class D.

TABLE C-4
GEOMETRIC MEAN PEAK GROUND ACCELERATION
MAXIMUM CONSIDERED EARTHQUAKE

Criteria	Value	Reference
Mapped Peak Ground Acceleration (g)	PGA = 0.251	USGS Mapped Value
Site Coefficients (Site Class D)	F_{PGA} = 1.35	ASCE Table 11.8-1
Geometric Mean PGA (g)	PGA_M = 0.338	ASCE Equations 11.8-1

C4.4 Seismically Induced Ground Failure

C4.4.1 Liquefaction

Settlement of the ground surface with consequential differential movement of structures is a major cause of seismic damage for buildings founded on alluvial deposits. Vibration settlement of relatively dry and loose granular deposits beneath structures can be readily induced by the horizontal components of ground shaking associated with even moderate intensity earthquakes. Silver and Seed (1971) have demonstrated that settlement of dry sands due to cyclic loading is a function of 1) the relative density of the soil; 2) the magnitude of the cyclic shear stress; and 3) the number of strain cycles. As indicated above, seismically-induced ground settlement can also occur due to the liquefaction of relatively loose, saturated granular deposits.

In order for liquefaction triggering to occur due to ground shaking, it is generally accepted that four conditions will exist:

- The subsurface soils are in a relatively loose state
- The soils are saturated
- The soils have low plasticity
- Ground shaking is of sufficient intensity to act as a triggering mechanism

In addition, after soil liquefies, dissipation of the excess pore pressures can produce volume changes within the liquefied soil layer, which can result in ground surface settlement.

The current and historical depth to groundwater is relatively deep (>50 feet bgs), therefore the liquefaction potential at the Site is low.

C4.4.2 Lateral Spread

Lateral spreading is a potential hazard commonly associated with liquefaction where extensional ground cracking and settlement occur as a response to lateral migration of subsurface liquefiable material. These phenomena typically occur adjacent to free faces such as slopes and creek channels. The potential for liquefaction is low, therefore the potential for lateral spreading to take place at the site is low.

C4.4.3 Dynamic Compaction/Seismic Settlement

Another type of seismically induced ground failure, which can occur as a result of seismic shaking, is dynamic compaction, or seismic settlement. Such phenomena typically occur in unsaturated, loose granular material or uncompacted fill soils.

A liquefaction/seismic settlement analysis was performed using the program Liquefy Pro version 5.8k using soil boring data from B-8. Input parameters for the liquefaction and settlement analysis were based upon:

- Soil densities and fines content estimated from boring data.
- PGA based upon the geometric mean peak ground acceleration or 0.338g.
- Magnitude 5.5 of controlling earthquake from Deaggregation of the seismic hazard.
- Assumed depth to groundwater of 51 feet bgs from historical high.
- A Factor-of-Safety of 1.3 was used for analysis.

Based on the analysis the total estimated settlement is 0.17 inch with a differential settlement of 0.09 inch.

C5. REFERENCES

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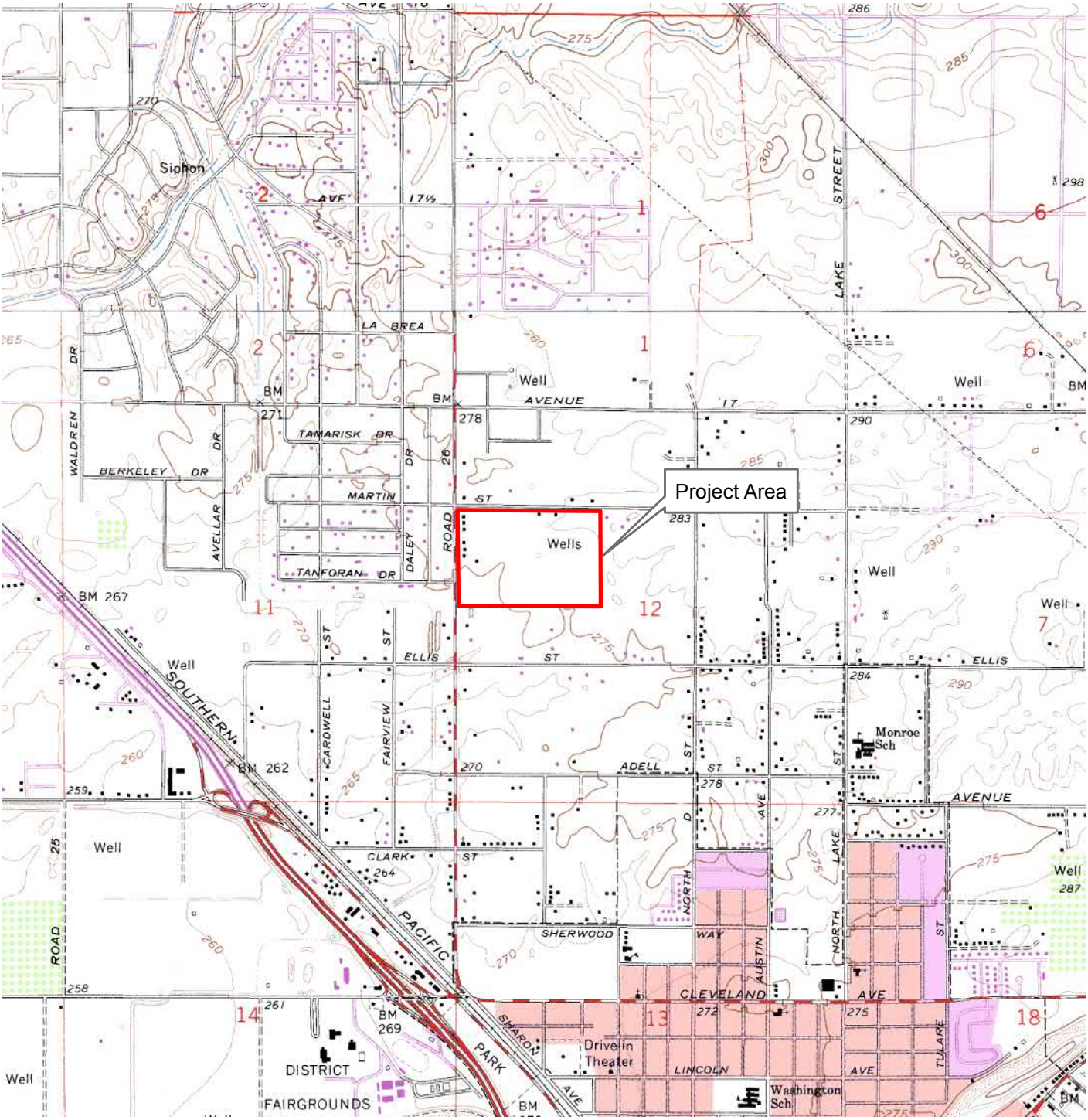

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Feet

Reference: http://atlas.ca.gov/quads/

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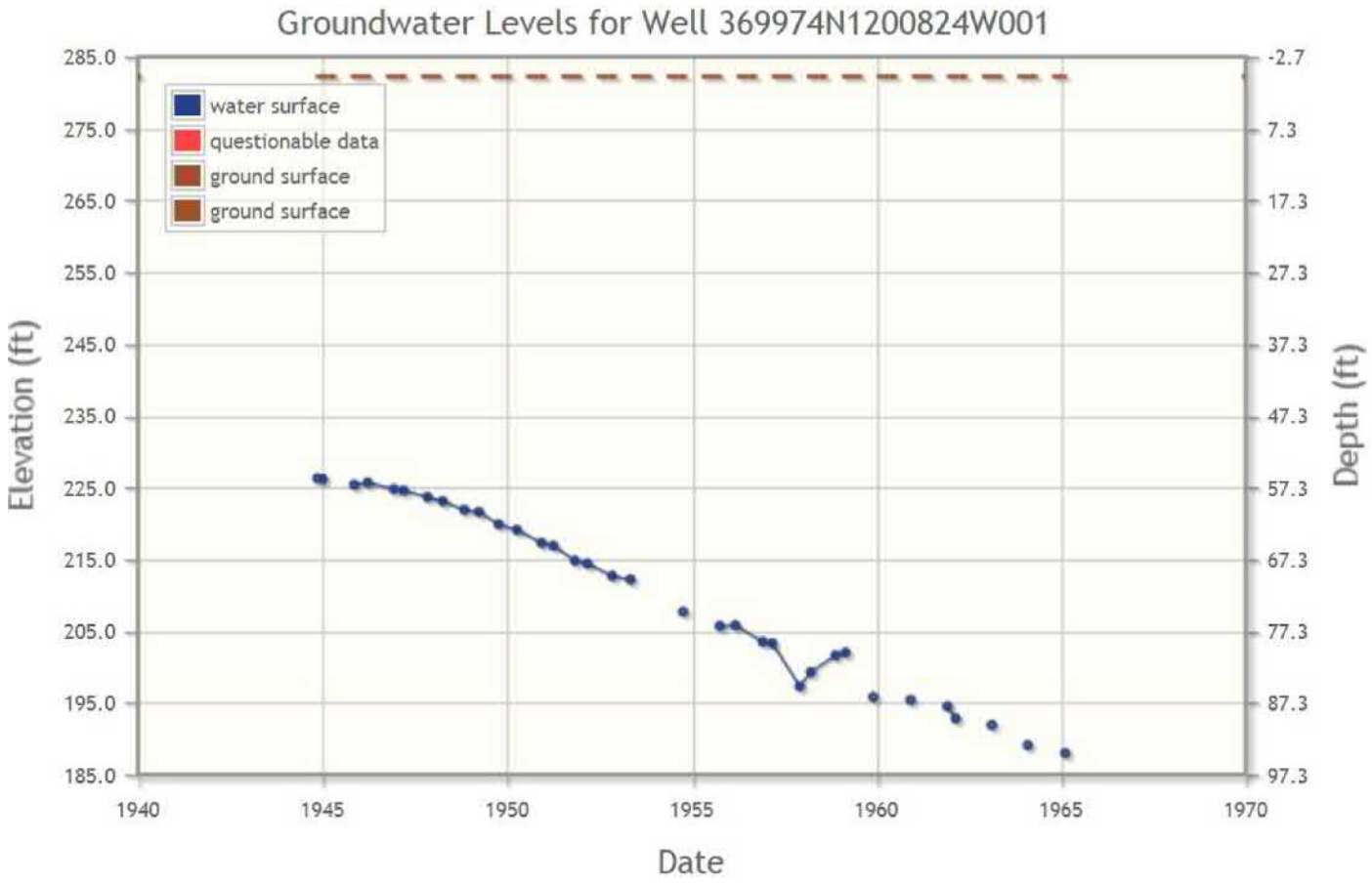
Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

Figure C-1
Topographic Map
BSK Project G2017011F



State Well Number: 11S17E02Q001M
Latitude (NAD83): 36.997400
Longitude (NAD83): -120.0824
Groundwater Basin (code): Madera (5-22.06)
Reference Point Elevation (NAVD88 ft): 284.30
Ground Surface Elevation (NAVD88 ft): 282.30

Reference: http://www.water.ca.gov/waterdatalibrary/index.cfm

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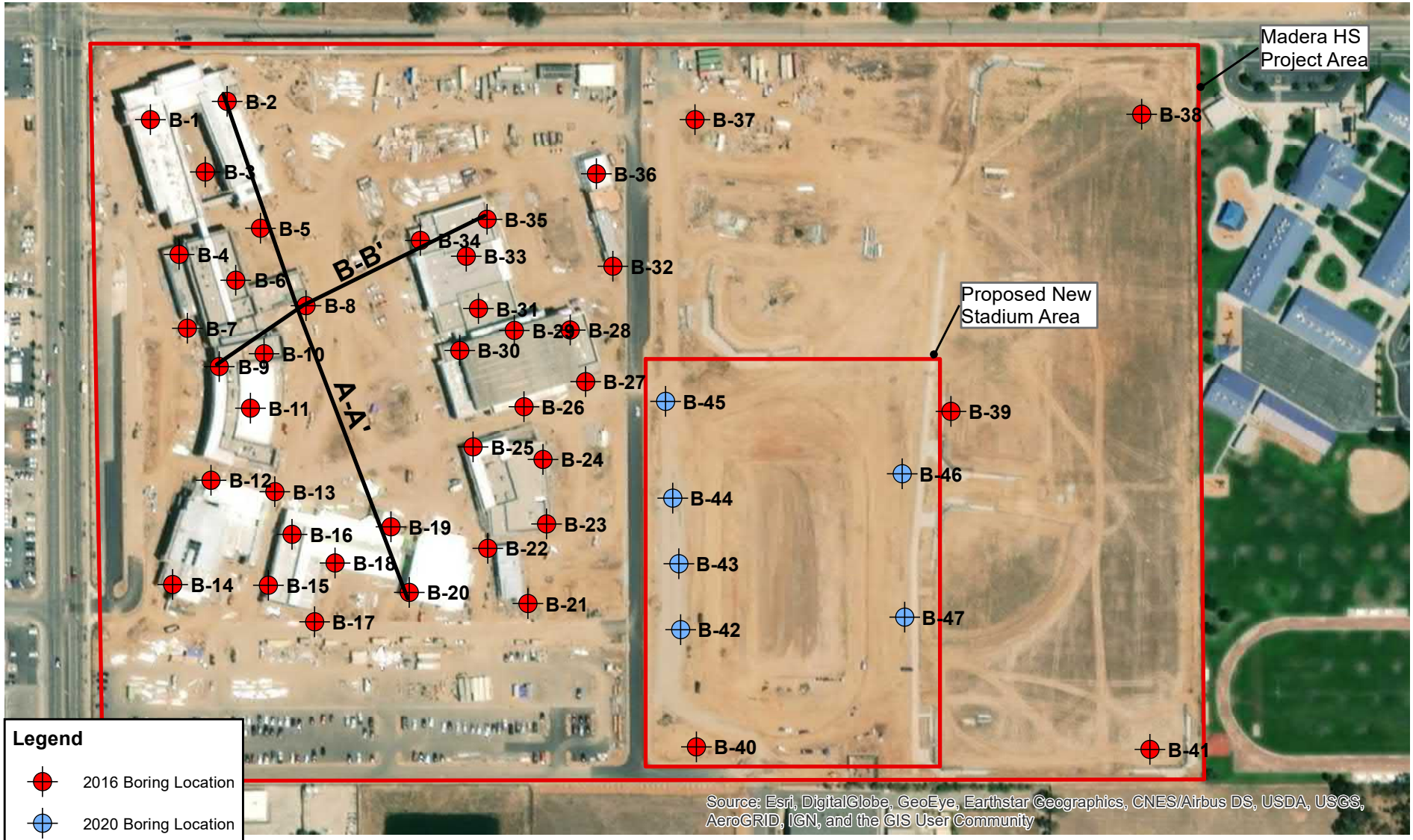
Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

Figure C-2
Area Hydrograph
BSK Project G2017011F



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Map Date: 8/24/2020

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Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

Figure C-3
Site Map
BSK Project G2017011F

Reference: Source: Source: Geologic Map of California, Fresno and Santa Cruz Sheets, 1965 and 1958

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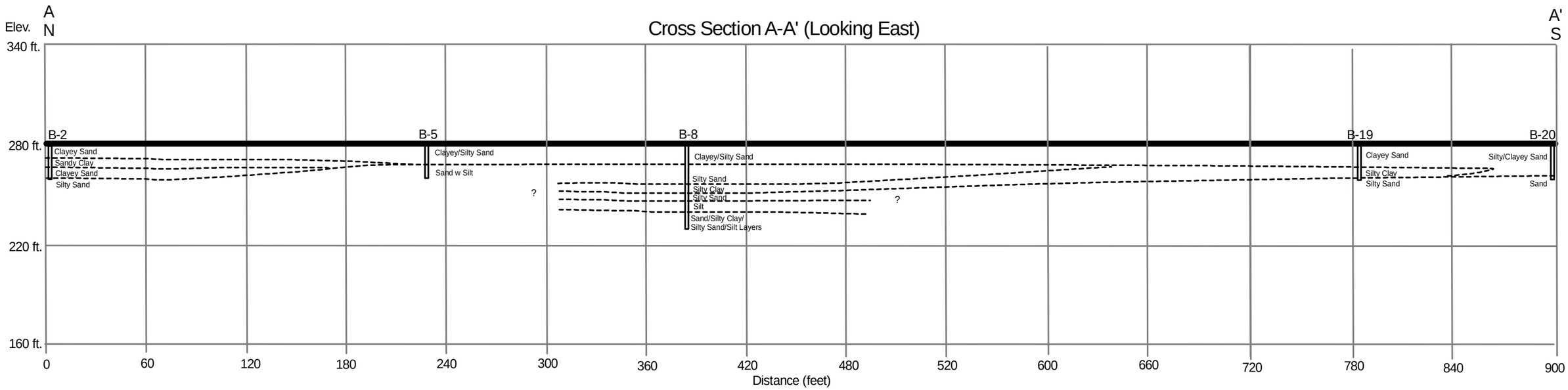
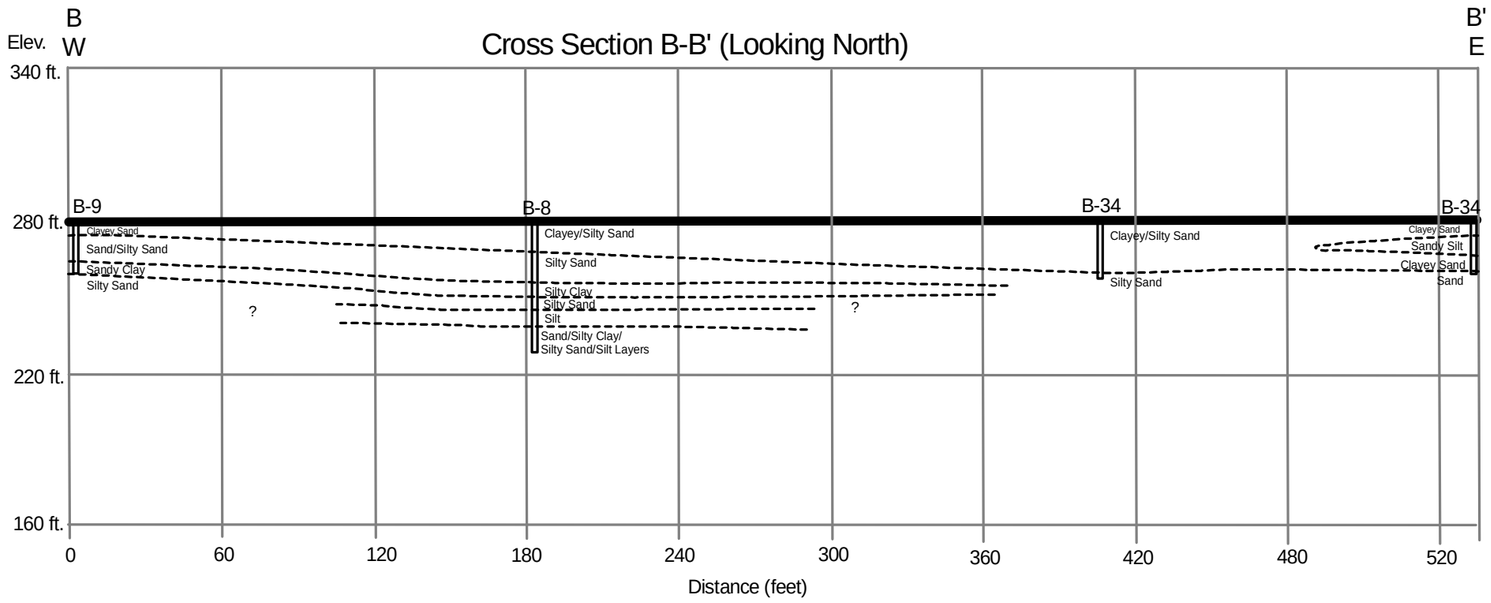
Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

Figure C-3
Geologic Map
BSK Project G2017011F





LEGEND

Unit Contact

Soil Boring/CPT Location

Groundwater Level (Year)

NOTES:
1) Locations are Approximate.

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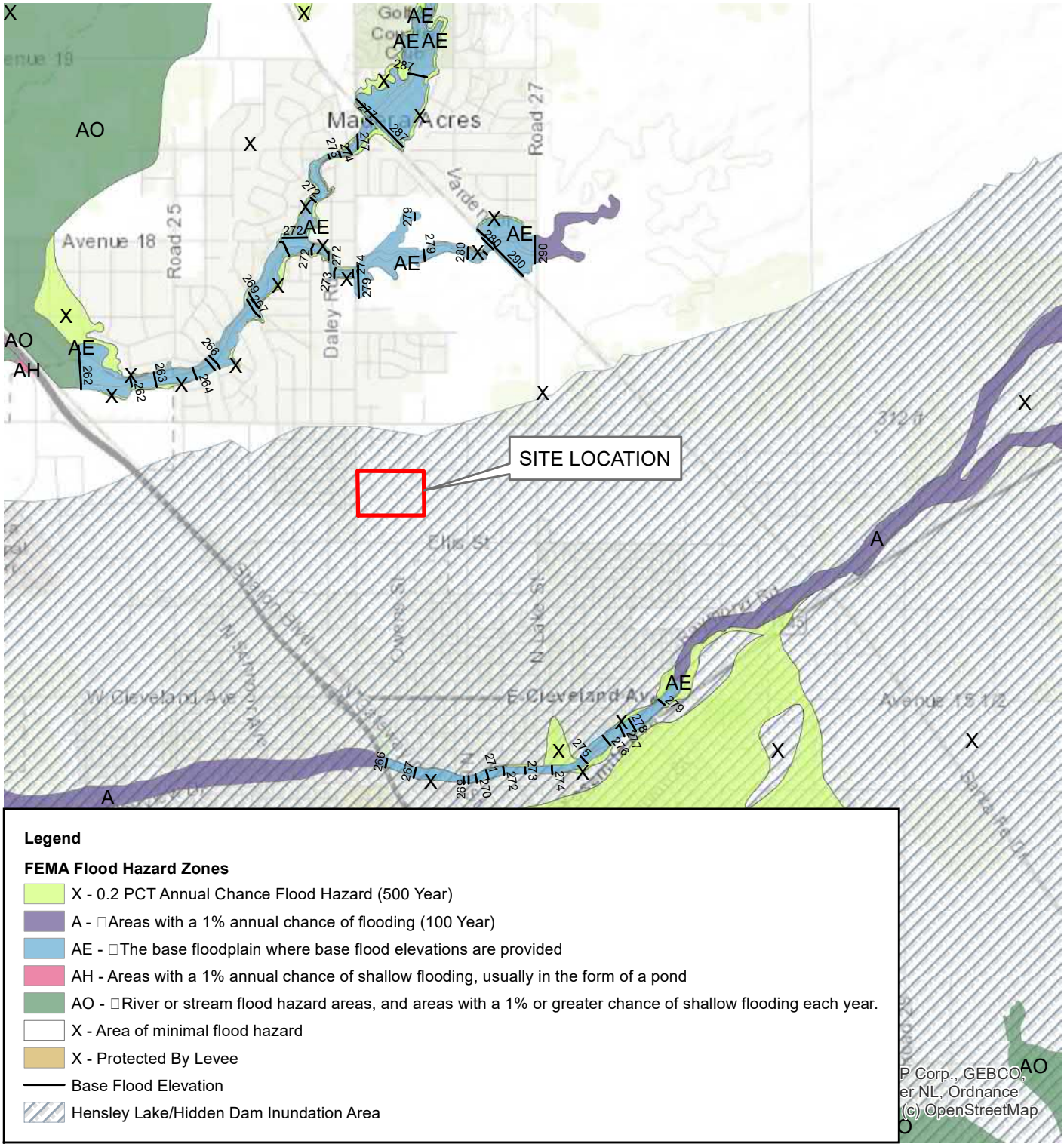
0 60 120
Approximate Scale in Feet
Horizontal=Vertical

Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

BSK Project G2017011F
Geologic Cross Sections
A-A' & B-B'
Figure C-5



0 0.5 1 2 Miles

N W E S

Reference: Federal Emergency Management Agency (FEMA), Flood Hazard Layer 06039C, 9/26/2016
California Emergency Management Agency, Flood Inundation GIS files

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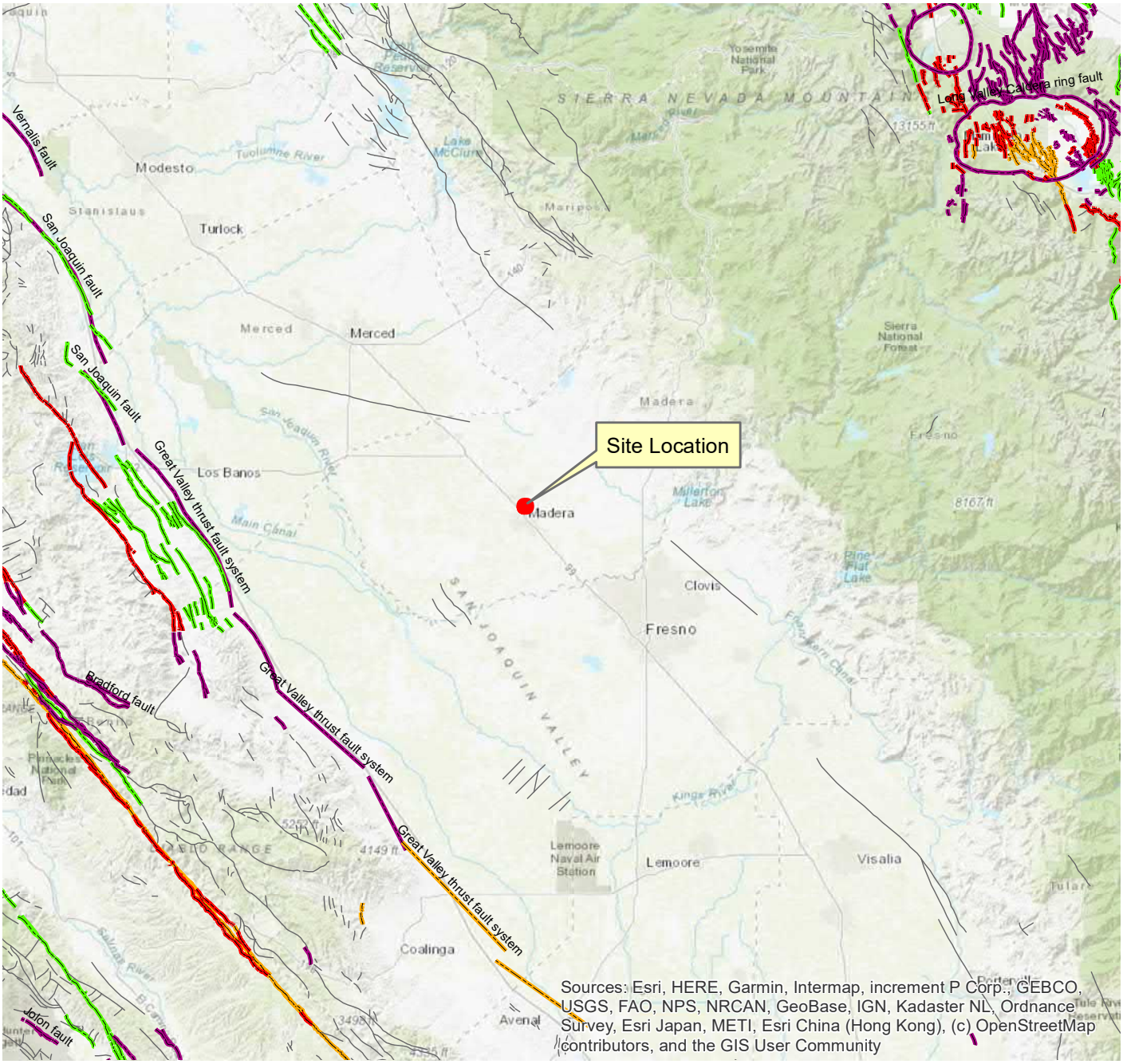
Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

Figure C-6
Flood Hazard Map
BSK Project G2017011F



N
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0 10 20 40

Scale in Miles

USGS Quaternary Fault Database
https://earthquake.usgs.gov/static/lfs/nshm/qfaults/Qfaults_GIS.zip

Legend

Fault Activity Age

- Historic
- Latest Quaternary
- Late Quaternary
- Middle and Late Quaternary
- Undifferentiated Quaternary
- Pre Quaternary Faults

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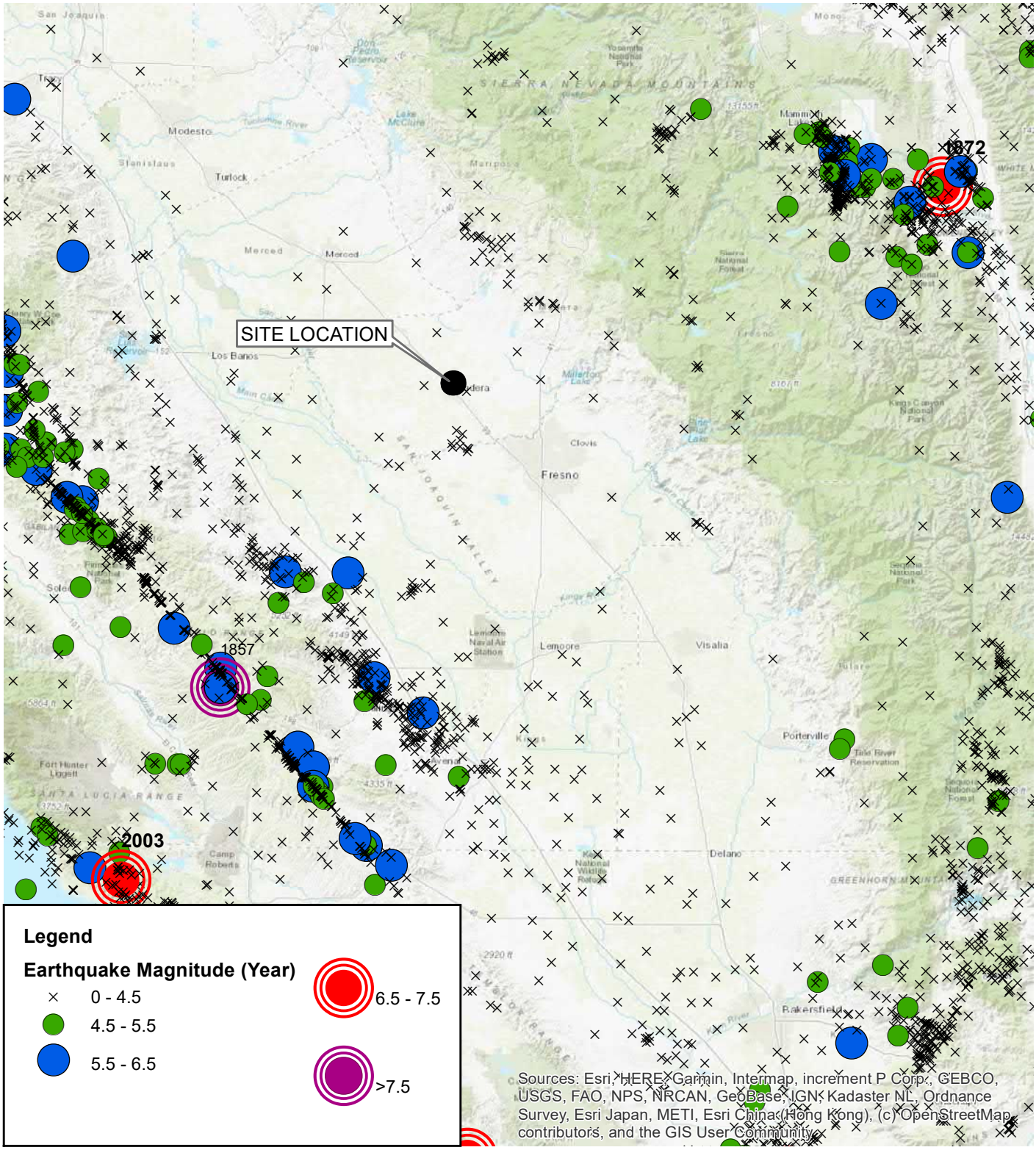
Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

Figure C-7
Area Fault Map
BSK Project G2017011F



Source: National Seismic Hazard Model (NSHM) Earthquake Catalogs, 2014 NSHM Catalogs, USGS, https://github.com/usgs/nshmp-haz-catalogs

Map Date: 8/25/2020

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Geologic/Seismic Hazard Evaluation
New Madera High School Stadium
Madera, California

Figure C-8
Earthquake Epicenter Map
BSK Project G2017011F

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Licensed to , 9/9/2016 12:37:26 PM

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Subtitle:

Surface Elev.=
Hole No.=B-8
Depth of Hole= 51.50 ft
Water Table during Earthquake= 51.00 ft
Water Table during In-Situ Testing= 51.00 ft
Max. Acceleration= 0.31 g
Earthquake Magnitude= 6.20

Input Data:

Surface Elev.=
Hole No.=B-8
Depth of Hole=51.50 ft
Water Table during Earthquake= 51.00 ft
Water Table during In-Situ Testing= 51.00 ft
Max. Acceleration=0.31 g
Earthquake Magnitude=6.20
No-Liquefiable Soils: Based on Analysis

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Tokimatsu, M-correction
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.3
7. Borehole Diameter, Cb= 1.15
8. Sampling Method, Cs= 1.2
9. User request factor of safety (apply to CSR) , User= 1.3
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
1.00	23.00	124.00	38.00
5.00	100.00	124.00	38.00
10.00	40.00	140.00	38.00
15.00	35.00	140.00	38.00
20.00	31.00	124.00	38.00
25.00	30.00	124.00	50.00
30.00	32.00	124.00	15.00
35.00	16.00	124.00	50.00
40.00	34.00	124.00	10.00
45.00	12.00	124.00	50.00
48.00	12.00	124.00	15.00
50.00	17.00	124.00	50.00

Output Results:

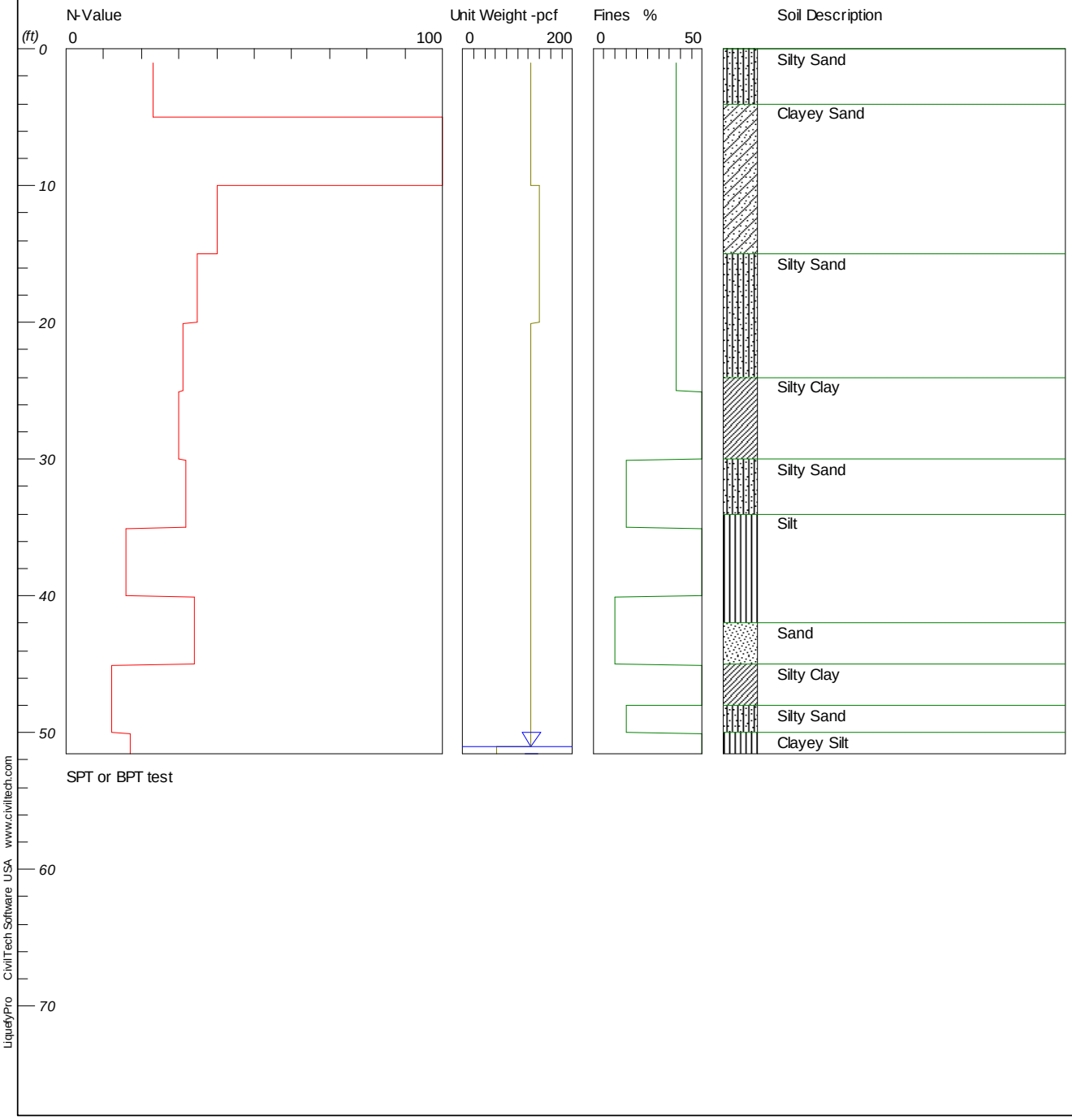
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.17 in.
Total Settlement of Saturated and Unsaturated Sands=0.17 in.
Differential Settlement=0.084 to 0.110 in.

LIQUEFACTION ANALYSIS

Madera New High School Stadium

Hole No.=B-8 Water Depth=51 ft

Magnitude=5.5
Acceleration=0.338g



BSK Associates

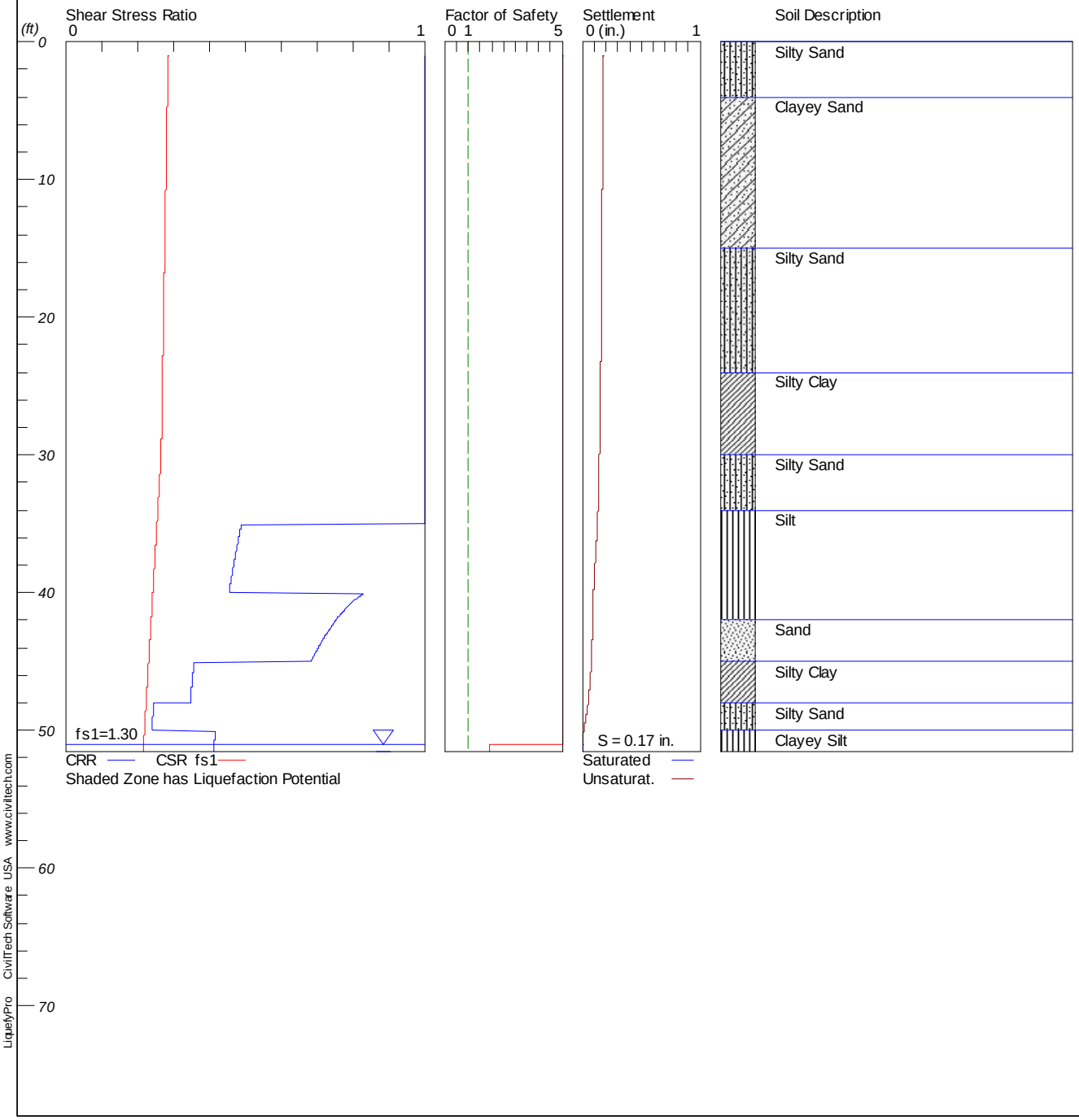
Figure C-9

LIQUEFACTION ANALYSIS

Madera New High School Stadium

Hole No.=B-8 Water Depth=51 ft

Magnitude=5.5
Acceleration=0.338g



BSK Associates

Figure C-9

LIQUEFACTION ANALYSIS SUMMARY
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Input File Name: T:\Project Docs\G2017011F - New Madera HS - Stadium\B-8_2019cbc.liq
Title: Madera New High School Stadium
Subtitle:

Surface Elev.=
Hole No.=B-8
Depth of Hole= 51.50 ft
Water Table during Earthquake= 51.00 ft
Water Table during In-Situ Testing= 51.00 ft
Max. Acceleration= 0.34 g
Earthquake Magnitude= 5.50

Input Data:
Surface Elev.=
Hole No.=B-8
Depth of Hole=51.50 ft
Water Table during Earthquake= 51.00 ft
Water Table during In-Situ Testing= 51.00 ft
Max. Acceleration=0.34 g
Earthquake Magnitude=5.50
No-Liquefiable Soils: Based on Analysis

1. SPT or BPT Calculation.
2. Settlement Analysis Method: Tokimatsu, M-correction
3. Fines Correction for Liquefaction: Stark/Olson et al.*
4. Fine Correction for Settlement: During Liquefaction*
5. Settlement Calculation in: All zones*
6. Hammer Energy Ratio, Ce = 1.3
7. Borehole Diameter, Cb= 1
8. Sampling Method, Cs= 1
9. User request factor of safety (apply to CSR) , User= 1.3
   Plot one CSR curve (fs1=User)
10. Use Curve Smoothing: No
* Recommended Options

In-Situ Test Data:

Depth ft	SPT	gamma pcf	Fines %
1.00	23.00	124.00	38.00
5.00	100.00	124.00	38.00
10.00	40.00	140.00	38.00
15.00	35.00	140.00	38.00
20.00	31.00	124.00	38.00
25.00	30.00	124.00	50.00
30.00	32.00	124.00	15.00
35.00	16.00	124.00	50.00
40.00	34.00	124.00	10.00
45.00	12.00	124.00	50.00
48.00	12.00	124.00	15.00
50.00	17.00	124.00	50.00

Output Results:
Settlement of Saturated Sands=0.00 in.
Settlement of Unsaturated Sands=0.17 in.
Total Settlement of Saturated and Unsaturated Sands=0.17 in.
Differential Settlement=0.085 to 0.112 in.

REQUEST FOR INFORMATION

RFI No.: HCCI#012

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Attn: Matt Heiss

Date: 10.26.2021

Respond By:

Architect Project No.

Project: MTHS Stadium

INFORMATION REQUESTED: Pole Vault Box and Surfacing

Please provide manufacturer and model number of the Pole Vault box shown on K-SD/X103. Also please confirm track surfacing associated with the Pole Vault area is to be by other as noted on the detail.

Response:

Pole vault detailing to be revised to clarify requirements. See Clarifications in forthcoming addenda #3

Consultant's Signature: _____

Date: _____

Architect's Signature: [signature]

Date 10/29/2021

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other

Pages Attached: ____

REQUEST FOR INFORMATION

RFI No.: HCCI#013

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Attn: Matt Heiss

Date: 10.26.2021

Respond By:

Architect Project No.

Project: MTHS Stadium

INFORMATION REQUESTED: Storefront Deferred Approval

Please advise if the Storefronts are deferred approval with DSA? They are not listed as such but there are Storefronts that over 10'W or 10'H. This normally requires deferred approval.

If so, what requirements for Engineering, etc... will be required?

RESPONSE:

DSA did not require Submittal of storefrotns as a deferred approval for this application number. Fastening requirements for storefront frames are indicated in details.

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 10/29/21

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: ____

Pre-Bid REQUEST FOR INFORMATION

RFI No:	1
Date:	10/20/21

Submitted to: Darden Architects	Submitted By: Sarah Sherwood
Attention: Matt Heiss	E-mail: estimating@amgassociatesinc.com
Phone: 661-251-7401	Fax: 661-251-7405

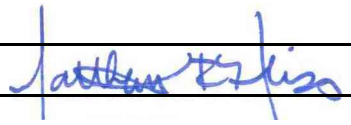
Project:	**Matilda Torres High School Stadium Project**	Spec. Section:	Contractor & Subcontractor Fingerprinting Requirements
Location:	Madera, CA	Drawing #:	
Sent Via	Email	Detail:	

The following information is requested:

Would it be acceptable for the Subcontractor's Exemption form to be turned in within 24 hours of the bid date?

Response:

The subcontractor fingerprinting requirements exemption form shall be signed at the bottom of the form and submitted with the bid as an acknowledgement of the form.



Pre-Bid REQUEST FOR INFORMATION

RFI No:	2
Date:	10/28/21

Submitted to: Darden Architects	Submitted By: Sarah Sherwood
Attention: Matt Heiss	E-mail: estimating@amgassociatesinc.com
Phone: 661-251-7401	Fax: 661-251-7405

Project:	**Matilda Torres High School Stadium Project**	Spec. Section:	Recycled Content Certification Form
Location:	Madera, CA	Drawing #:	
Sent Via	Email	Detail:	

The following information is requested:

Please confirm that the Recycled Content Certification form is required to be submitted with the bid.

Response:

The Recycled Content Certification Form is to be filled out (estimated as best as possible) and submitted with the bid as an acknowledgement of the form.

26535 Summit Circle, Santa Clarita CA 91350. (661) 251-7401 FAX (661) 251-7405

Pre-Bid REQUEST FOR INFORMATION

RFI No:	3
Date:	10/28/21

Submitted to: Darden Architects	Submitted By: Sarah Sherwood
Attention: Matt Heiss	E-mail: estimating@amgassociatesinc.com
Phone: 661-251-7401	Fax: 661-251-7405

Project:	**Matilda Torres High School Stadium Project**	Spec. Section:	Contractor & Subcontractor Fingerprinting Requirements
Location:	Madera, CA	Drawing #:	
Sent Via	Email	Detail:	

The following information is requested:

Please confirm that the Contractor & Subcontractor Fingerprinting Requirements forms are to be submitted with the bid. If so, please confirm that this is to be completed by the School District Official, not by the contractor or subcontractors.

Response:

•AMG #3 – See response to RFI – AMG #1

Pre-Bid REQUEST FOR INFORMATION

RFI No:	4
Date:	10/29/21

Submitted to: Darden Architects	Submitted By: Bari Heiden
Attention: Matt Heiss	E-mail: estimating@amgassociatesinc.com
Phone: 661-251-7401	Fax: 661-251-7405

Project:	**Matilda Torres High School Stadium Project**	Spec. Section:	CMU Veneer
Location:	Madera, CA	Drawing #:	
Sent Via	Email	Detail:	

The following information is requested:

CMU Veneer Detail J14 – X/A504, Shows the Halfen Channel anchored to the Backer Board ?.
Every Job that I have done using the Halfen anchor, the track had to be screwed in to a stud.
Backer Board and Plaster won't hold the weight in a Earth Quake.
The Architect should have the Engineer review this Detail.

Response:

Halfen channels are to be fastened to z furring as indicated in detail J14. Z furring spans 1 " exterior rigid insulation and is fastened directly to stud.

26535 Summit Circle, Santa Clarita CA 91350. (661) 251-7401 FAX (661) 251-7405

Pre-Bid REQUEST FOR INFORMATION

RFI No:	5
Date:	10/29/21

Submitted to: Darden Architects	Submitted By: David Silva
Attention: Matt Heiss	E-mail: estimating@amgassociatesinc.com
Phone: 661-251-7401	Fax: 661-251-7405

Project:	**Matilda Torres High School Stadium Project**	Spec. Section:	00420
Location:	Madera, CA	Drawing #:	
Sent Via	Email	Detail:	

The following information is requested:

Regarding the designation of subcontractors, please confirm that on bid date the city of the subcontractor being listed is sufficient and not the full address? Can the full address, phone, fax and expiration dated be submitted 24 hours after the bid?

Response:

Refer to Front End documents, Section 00100 INFORMATION FOR BIDDERS, Paragraph 9 DESIGNATION OF SUBCONTRACTORS for required information on bid day. Provide full address of designated subs on bid form.

Phone number and license expiration date may be submitted within 24 hours after bid.

26535 Summit Circle, Santa Clarita CA 91350. (661) 251-7401 FAX (661) 251-7405

Pre-Bid REQUEST FOR INFORMATION

RFI No:	6
Date:	10/29/21

Submitted to: Darden Architects	Submitted By: David Silva
Attention: Matt Heiss	E-mail: estimating@amgassociatesinc.com
Phone: 661-251-7401	Fax: 661-251-7405

Project:	**Matilda Torres High School Stadium Project**	Spec. Section:	
Location:	Madera, CA	Drawing #:	
Sent Via	Email	Detail:	

The following information is requested:

Regarding the builder's risk requirement, please confirm no earthquake neither flood coverage is required.

Response:

Regarding Builders Risk, Earthquake and flood coverage is not required

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Bakersfield, CA 93380-1977
Phone 661/410-0000
Fax 661/410-0402
www.a-celectric.com

REQUEST FOR INFORMATION

To: Darden Architects
6700 N. West Ave.
Fresno, CA 93711
Attn: Matt Heiss

Date: 10/22/21
RFI No.: A-C 02
Customer Job No.: 092721
A-C Job No.: F-21-116
Job Name: Toros Stadium - MUSD

Subject: Site Pullbox Sizes

Spec. Section / Page:

Sheet / Detail: E600 Detail 6

Question / Problem:

Detail 6 on E600 describes the installation method for concrete pullboxes on the project. Note 3 on this detail says that the size of the pullboxes are 'per plans', however, I can't find a chart or note that calls out sizing for the various pullboxes required for the project. Please direct me to the location where these are called out, or provide a list of sizes for the pullboxes shown on the plans.

Please respond by:

Attachments:

Tom Henderson - Estimator
Signed **Name and Title**

Reply:

Sizes for the site pullboxes have been added to the plans. Refer to Addendum #3 drawings.

Date: 11/3/2021

Attachments:

K.C. Hogan, TEE - Engineer
Signed **Name and Title**

A-C Electric Company — CALIFORNIA C-10 LICENSE 99849

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Phone 661/410-0000
Fax 661/410-0402
www.a-celectric.com

REQUEST FOR INFORMATION

To: Darden Architects
6700 N. West Ave.
Fresno, CA 93711
Attn: Matt Heiss

Date: 10/26/21
RFI No.: A-C 03
Customer Job No.: 092721
A-C Job No.: F-21-116
Job Name: Toros Stadium - MUSD

Subject: Fixture F2D

Spec. Section / Page:

Sheet / Detail: E003 & E201

Question / Problem:

Detail 3 on sheet E201 shows four F2D fixtures in Room L104 (Snack Bar). These fixtures are not specified on the Luminaire Schedule on sheet E003. Please provide specifications for this fixture type.

Please respond by:

Attachments:

Tom Henderson - Estimator
Signed **Name and Title**

Reply:

Type was mistagged on the floor plan. Should be type F2C. Refer to Addendum #3 drawings for updated Luminaire Schedule and floor plan tags.

Date: 11/3/2021

Attachments:

K.C. Hogan, TEE - Engineer
Signed **Name and Title**

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Phone 661/410-0000
Fax 661/410-0402
www.a-celectric.com

REQUEST FOR INFORMATION

To: Darden Architects
6700 N. West Ave.
Fresno, CA 93711
Attn: Matt Heiss

Date: 10/26/21
RFI No.: A-C 04
Customer Job No.: 092721
A-C Job No.: F-21-116
Job Name: Toros Stadium - MUSD

Subject: Fixture F7/60

Spec. Section / Page:

Sheet / Detail: E003 & E205

Question / Problem:

Detail 5 on sheet E205 calls for two F7/60 fixtures in the stairwell lightboxes. These fixtures are not specified on the Luminaire Schedule on sheet E003. Please provide specifications for this fixture type.

Please respond by:

Attachments:

Signed

Tom Henderson - Estimator
Name and Title

Reply:

Type has been added to the Luminaire Schedule. Refer to Addendum #3 drawings for updated schedule.

Date: 11/3/2021

Attachments:

Signed

K.C. Hogan, TEE - Engineer
Name and Title

A-C Electric Company — CALIFORNIA C-10 LICENSE 99849

ENGINEERING–CONSTRUCTION–TECHNOLOGY–SERVICE

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2921 Hangar Way (93308)
Bakersfield, CA 93380-1977
Phone 661/410-0000
Fax 661/410-0402
www.a-celectric.com

REQUEST FOR INFORMATION

To: Darden Architects
6700 N. West Ave.
Fresno, CA 93711
Attn: Matt Heiss

Date: 10/20/21
RFI No.: A-C 01
Customer Job No.: 092721
A-C Job No.: F-21-116
Job Name: Toros Stadium - MUSD

Subject: Tennis Court Lighting

Spec. Section / Page:

Sheet / Detail: E101

Question / Problem:

Between Courts 1&2 and Courts 7&8, there are pairs of PT1 fixtures shown apparently sharing a single pole. Is the intention to have a two head variant of the PT1 fixture, with heads at 180 degrees?

Please respond by:

Attachments:

Tom Henderson - Estimator
Signed **Name and Title**

Reply:

We added a new PT5 to the Luminaire Schedule to address this pole with two heads.
PTx series tags refer to pole and head assemblies. Head types ST1 and ST2 were inadvertently omitted. Refer to updated Luminaire Schedule issued in Addendum #3.

Date: 11/3/2021

Attachments:

K.C. Hogan, TEE - Engineer
Signed **Name and Title**

REQUEST FOR INFORMATION

RFI No.:

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 11/1/21

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: Matilda Torres HS Stadium

INFORMATION REQUESTED:

test

277313 E501 Note: 3 Please confirm if the Existing Stadium Field Speakers are to remain or to be replaced.
277313 E501 Note: 2 Please confirm if the Existing Baseball and Softball Field Speakers are to remain or to be replaced.
277313 E501 Note: 3 Please confirm if the existing Nevco Channel Mixer is to remain or to be replaced.

Cost Impact: None: _____ Signature: _____

Schedule Impact: None: _____ Days Pages Attached: _____

Trade/Contractor: Schedule Task No/Item:

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in the Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

If the Contractor considers that this supplemental instruction requires a change in the Contract Sum or Contract Time, the Contractor shall not proceed with this Work and shall promptly submit an itemized proposal to the Architect for doing this work. If your proposal is found to be satisfactory and in order, this supplemental instruction will be superseded by a Construction Change Directive.

Refered To: Refered Date: Return Date:

SUPPLEMENTAL INSTRUCTIONS:

1. The existing stadium field speakers are to remain. Refer to 3/E501.
2. Speakers do not currently exist for the baseball and softball fields. Provide new speakers as noted on plans.
3. The Nevco Channel Mixer is to remain and will be relocated to the new press box. Refer to 3/E501.

Consultant's Signature: Deryle Rowe Architect's Signature: _____

Date: November 3, 2021 Date _____

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: _____

REQUEST FOR INFORMATION

RFI No.:

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 11/1/21
Respond By:

Architect Project No.

Attn: Matt Heiss

Project: Matilda Torres HS Stadium

INFORMATION REQUESTED:

test

274116 2.03 Pg.5 A PVS411D is called out for the Extron Digital Wall/Polvault system. Extron's current model of PVS is the 407D. Do we include the 407D in our pricing?

274116 #6 Pg.9 (2) PVT SW HDMI inputs are called out for media source. Note:1 Pg.E501 only shows (1) PVT HDMI input. Please confirm the qty. inputs needed.

Cost Impact: None: _____ Signature: _____

Schedule Impact: None: _____ Days Pages Attached: _____

Trade/Contractor: Schedule Task No/Item:

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in the Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

If the Contractor considers that this supplemental instruction requires a change in the Contract Sum or Contract Time, the Contractor shall not proceed with this Work and shall promptly submit an itemized proposal to the Architect for doing this work. If your proposal is found to be satisfactory and in order, this supplemental instruction will be superseded by a Construction Change Directive.

Refered To: Refered Date: Return Date:

SUPPLEMENTAL INSTRUCTIONS:

1. Provide the current model 407D
2. One input plate is required

Consultant's Signature: Deryle Rowe Architect's Signature: _____

Date: November 3, 2021 Date _____

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: _____

REQUEST FOR INFORMATION

RFI No.:

To: **Darden Architects, Inc.**
6790 North West Avenue
Fresno, California 93711

Date: 11/1/21
Respond By:

Architect Project No.

Attn: Matt Heiss

Project: Matilda Torres HS Stadium

INFORMATION REQUESTED:

test

274116 2.05 Pg.11 Please clarify the intent of an in-wall FSR #PWB-100 Enclosure for a ceiling mounted projector.

274116 Projector Screen No projector screen location or manufacture has been called out on the drawings. What will the classroom projectors display on?

Cost Impact: None: _____ Signature: _____

Schedule Impact: None: _____ Days Pages Attached: _____

Trade/Contractor: Schedule Task No/Item:

The Work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in the Contract Sum or Contract Time. Proceeding with the Work in accordance with these instructions indicates your acknowledgement that there will be no change in the Contract Sum or Contract Time.

If the Contractor considers that this supplemental instruction requires a change in the Contract Sum or Contract Time, the Contractor shall not proceed with this Work and shall promptly submit an itemized proposal to the Architect for doing this work. If your proposal is found to be satisfactory and in order, this supplemental instruction will be superseded by a Construction Change Directive.

Refered To: Refered Date: Return Date:

SUPPLEMENTAL INSTRUCTIONS:

1. The FSR #PWB-100 is not required for the ceiling mounted projector and is not required to be part of scope.

2. The projector will display on the wall or white board.

Consultant's Signature: Deryle Rowe Architect's Signature: _____

Date: November 3, 2021 Date _____

Copy: ☐ Owner ☐ Inspector ☐ Testing Lab ☐ Structural ☐ Mech. ☐ Elec ☐ File ☐ Other Pages Attached: _____

Request for Information

To: **Matthew Heiss**
DARDEN ARCHITECTS, INC
Mobile: **(559) 448-8051**
Fax: **(559) 446-1765**
Email: **matth@dardenarchitects.com**

From: **Joe Fuentes**
Marina Landscape, Inc.
3707 W Garden Grove Blvd
Orange, CA 92868
Office: **(714) 704-0467**
Fax: **(714) 935-0797**
Email: **joe@marinaco.com**

Remarks			
☐ Urgent	☐ For your information	☑ Reply ASAP	☑ Please comment

Date: **10/22/2021**
Project: **MATILDA TORRES HS STADIUM**
Subject: **LANDSCAPE AND IRRIGATION**

1. Dietes bicolor shrubs appear on planting legend/ SD-L200 as 1-gallon but also referred to as 5 gallon on the left corner of the page. Please indicate if callouts will supersede where this inconsistency occurs as to sizing.

2. Keynote #3 on the irrigation sleeve legend/ SD/L100 requires a 10" diameter SDR35 PVC mainline sleeve. Sheet SD/L102 shows the same keynote where a lateral condition occurs at the paved area between the two fields. Please confirm the callout requirement will prevail or revise plan to annotate the correct lateral sleeve requirement here.

3. Irrigation legend on sheet SD/L100 indicates schedule 40 pvc pipe for irrigation laterals, however, specification section 32 84 32, subsection 2.1 Piping materials, B. Fittings requires schedule 80 pvc for 3" and larger pipe. Please advise what will supersede where plans conflict with specification requirements.

Responses;

1. Provide one gallon (1) size container for all DIETES bicolor on planting plans.
2. Provide sleeves as indicated on plan. There are two sleeves required in the area of question. One 10" and one 3".
3. Specifications require schedule 40 PVC lateral line pipe for all lateral lines. Sch 40 PVC solvent weld fittings are to be used on lateral pipes 2 1/2" and smaller. Sch 80 PVC solvent weld fittings are to be used on lateral pipes 3" on larger.

REQUEST FOR INFORMATION

RFI No.: Bedards 001

To: Darden Architects, Inc.
6790 North West Avenue
Fresno, California 93711

Date: 11/1/2021

Respond By:

Architect Project No.

Attn: Matt Heiss

Project: MTHS Stadium

INFORMATION REQUESTED:

Question #1:
Section 23 09 23 – Direct Digital Control And Energy Management System, Part 1 – General, 1.2 SCOPE, A., states, "All existing network controllers on District School sites shall have their software upgraded to the same revision as that installed at this site,"

Should the existing network controllers at other District School sites that cannot be upgraded to the same software revision as at this site, be replaced to operate at the same software version as at this site?

Question #2:
Should the EMS control the Indoor/Outdoor Units? No control detail was provided.

Question #3:
Should the EMS control the Package Air Conditioning Units? No control detail was provided.

Question #4:
Should the EMS control the Evaporative Cooler Unit? No control detail was provided.

Question #5
Should the EMS control the Makeup Air Unit? No control detail was provided.

RESPONSE:
Question 1 - See addenda 3 for clarification of controler software revision requirements

Questions 2-5
See sequence of operation section 23 09 23, 3.2 A thru H. "

Consultant's Signature: _____ Architect's Signature: Matthew Heiss

Date: _____ Date 11/4/2021

Copy: ☐Owner ☐Inspector ☐Testing Lab ☐Structural ☐Mech. ☐Elec ☐File ☐Other Pages Attached: ____