C I T Y OF B U R L I N G A M E

DEPARTMENT OF PARKS AND RECREATION

NOTICE TO BIDDERS

INSTRUCTION TO BIDDERS

PROPOSAL AND AGREEMENT

SPECIAL PROVISIONS

FOR

MILLS CANYON LANDSLIDE REPAIR
CITY PROJECT NO. 86780

FOR USE IN CONNECTION WITH
STANDARD SPECIFICATIONS DATED 2010
AND STANDARD PLANS DATED 2010
OF THE CALIFORNIA DEPARTMENT OF TRANSPORTATION

MAYOR: DONNA COLSON, MAYOR

CITY COUNCIL: EMILY BEACH, VICE MAYOR
RICARDO ORTIZ
PETER STEVENSON
MICHAEL BROWNRIGG

CITY MANAGER: LISA GOLDMAN

CITY CLERK: MEAGHAN HASSEL-SHEARER

PARKS AND RECREATION DIRECTOR: MARGARET GLOMSTAD

FOR THE MILLS CANYON LANDSLIDE REPAIR, CITY PROJECT NO. 86780 WILL BE RECEIVING BIDS FOR THIS PROJECT VIA PB SYSTEM™, A FULLY AUTOMATED WEB-BASED VENDOR AND BID MANAGEMENT SYSTEM. PROSPECTIVE BIDDERS SHOULD VISIT https://pbsystem.planetbids.com/portal/46106/portal-home TO REGISTER, DOWNLOAD BID DOCUMENTS AND SUBMIT THEIR BID. ALL BIDS MUST BE SUBMITTED TO PB SYSTEM™ BEFORE 2:00 P.M. ON WEDNESDAY, APRIL 24, 2024. BID RESULTS WILL BE PUBLICLY OPENED AND READ AT 2:30 P.M. ON WEDNESDAY,

APRIL 24, 2024. THOSE SUBMITTING A BID WILL BE SENT AN EMAIL WITH THE CONFERENCE CALL INFORMATION FOR THE BID OPENING. ADDITIONALLY, THE BID RESULTS WILL BE DISPLAYED IN THE PB SYSTEM™ AFTER THEY ARE PUBLICLY READ.

INDEX

APPENDIX

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Plan Set: Plan Set Mills Canyon Landslide Repair. Prepared by Wilsey Ham. Dated April 4, 2024.

Geotechnical Report: Geotechnical Investigation Mills canyon park Landslide, Burlingame, California. Prepared by Michelucci & Associates, Inc. Dated August 5, 2023.

Geotechnical Response Letters: Geotechnical response letter Dated March 5, 2024 from Michelucci & Associates, Inc. Requirements for regrading of access road back to original contours and slopes after construction is completed.

City Standard details are available upon request or found on the City webpage at:
https://www.burlingame.org/departments/public_works/city_standard_details.php

The City of Burlingame

PUBLIC WORKS DEPARTMENT
(650) 558-7230

CITY HALL - 501 PRIMROSE ROAD
BURLINGAME, CALIFORNIA 94010-3997

COMMUNITY CENTER
(650) 558-7300

NOTICE TO BIDDERS

For the **MILLS CANYON LANDSLIDE REPAIR, CITY PROJECT NO. 86780** will be receiving bids for this project via PB System™, a fully automated web-based vendor and bid management system. Prospective bidders should visit https://pbsystem.planetbids.com/portal/46106/portal-home to register, download bid documents, and submit their bid. All bids must be submitted to PB System™ before 2:00 P.M. on Wednesday, April 24, 2024. Bid results will be publicly opened and read at 2:30 P.M. on Wednesday, April 24, 2024. Those submitting a bid will be sent an email with the conference call information for the bid opening. Additionally, the bid results will be displayed in the PB System™ after they are publicly read.

Project work would include removing existing wooden wall, removing existing wooden steps, removing existing CMU wall, grading a temporary access road, installing a new retaining wall, backfilling wall, installing a concrete valley gutter, restoring temporary road to existing condition, and hydroseeding hillside.

Engineer's Estimate for the work is approximately $1,540,000.

Special Provisions, Specifications and Plans, including prevailing wage rates to be paid in compliance with Section 1773.2 of the California Labor Code and related provisions, may be inspected in the office of the City Engineer during normal working hours at City Hall, 501 Primrose Road, Burlingame, California. Prevailing wage rates are also available for review at the State of California Department of Industrial Relations' Website.

A **mandatory** pre-bid meeting associated with this project will be held on Monday, April 15, 2024, at 10:00 A.M., at the Sebastian entrance to Mills Canyon, adjacent to 2901 Arguello Drive, Burlingame, CA 94010.

Any questions regarding this project should be submitted through the online Q&A feature of PB System™. Questions can be submitted until 2:00 P.M. on Thursday, April 18, 2023. Answer will be made available via PB System™.

The Contractor shall possess a Class A license prior to submitting a bid.

No contractors and subcontractor may be listed on the bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code section 1771.5(a)].

All contractors and subcontractors will be required to furnish electronic certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement).

All contractors and subcontractors will be required to submit a California Air Resources Board (CARB) compliance statement with the bid proposal. Failure to submit this statement may result in a nonresponsive bid.

All work specified in this project, shall include the base bid and alternate bids (if shown in Proposal), and shall be completed within **40 of Working Days (WD) (forty working days)** from date of the Notice to Proceed.

Richard Holtz
Parks Superintendent/City Arborist

DATE OF POSTING: 04/05/2024

INSTRUCTIONS TO BIDDERS

MILLS CANYON LANDSLIDE REPAIR
CITY PROJECT NO. 86780

Proposals shall be submitted in accordance with the Special Provisions and these Instructions.

General Instructions

1. The City of Burlingame will be receiving bids for this project via PB System™, a fully automated web-based vendor and bid management system.

2. Bidders who have not already done so may register to use the system by proceeding as follows:
   a. Go to https://pbsystem.planetbids.com/portal/46106/portal-home
   b. Click on "Vendor Registration"
   c. Complete the form by navigating through the different tabs and submit.
   d. Once registered please go to Bid Opportunities to see our current bids and become a prospective bidder by downloading the bid documents.

3. A bid shall cover all items of the bidding schedule. Blank spaces in the bid shall be properly filled in, and the wording thereof must not be changed. Additions shall not be made to the items mentioned therein. Any unauthorized conditions, limitations or provisions attached to a proposal may cause its rejection. Alterations by erasures or interlineation shall be explained or noted in the bid over the signature of the bidder.

4. A **mandatory** pre-bid meeting associated with this project will be held on Monday, April 15, 2024, at 10:00 A.M., at the Sebastian entrance to Mills Canyon, adjacent to 2901 Arguello Drive, Burlingame, CA 94010.

5. Bids are due before 2:00 P.M. on Wednesday, April 24, 2024. Late bids will not be accepted. Bid results will be publicly opened and read at 2:30 P.M. on Wednesday, April 24, 2024. Those submitting a bid will be sent an email with the conference call information for the bid opening. Additionally, the bid results will be displayed

in the PB System™ after they are publicly read.

6. Any questions regarding this project should be submitted through the online Q&A feature of PB System™. **Questions will be accepted until 2:00 P.M. on Thursday, April 18, 2024.** Answers will be available online via PB System™.

7. Bids shall be made upon the form provided, properly executed and with all items completed. All signatures shall be in longhand.

8. Bids shall not be unbalanced. Any apparent unbalancing of bids may be considered sufficient grounds for rejection of a proposal.

Licensure

All bidders shall have the class of license(s) listed in the Notice Inviting Sealed Bids prior to submitting a bid.

Bidder's Bond

Each bid must be accompanied by cash, a certified or cashier's check, or a bidder's bond in the sum of not less than ten percent (10%) of the total aggregate of the bid, and such a check or bond shall be made payable to the City of Burlingame as set forth in Section 2 of the Special Provisions. If the successful bidder fails to file the bonds or to provide the insurance required by the Contract Documents, or refuses to enter into a contract within the specified time, it shall be liable for any difference by which the cost of procuring the work exceeds the amount of its bid and the bond or the amount of cash or check shall be available to offset such difference.

Examination of Plans, Specifications and Site Work

Before submitting a bid, each bidder shall carefully read the Specifications and all other Contract Documents. The bidder shall visit the site of the Project and shall fully inform itself as to all existing conditions and limitations under which the work is to be performed, and it shall include in its bid a sum to cover the cost of all items necessary to perform the work as set forth in the Contract Documents. No allowance of any kind whatsoever will be made to any bidder because of lack of such examination or knowledge. The submission of a bid shall be conclusive evidence that the bidder has made such an examination. *Bidders shall report any discrepancies in the field conditions or Contract Documents that they discover to the City before bids are opened.*

Competency of Bidder

Any bidder may be required to furnish evidence satisfactory to City that it and its proposed subcontractors have sufficient means and experience in the type of work called for to insure completion of the contract in a satisfactory manner.

Withdrawal of Bid

Any bidder may withdraw its bid, either personally or by a written request, at any time prior to the scheduled time for opening of bids.

Award or Rejection of Bids

The Contract, if awarded, will be awarded to the lowest responsible bidder subject to City's right to reject any or all bids and to waive informalities to the fullest extent provided by law in the bids.

Withdrawal of Bids after Opening

No bidder may withdraw its bid for a period of sixty (60) calendar days after the date set for the opening thereof, and the same shall be subject to acceptance by the City during this period.

Execution of Agreement

The successful bidder, as Contractor shall, within ten (10) calendar days after notice of award, execute and deliver to City one original and one counterpart of the Agreement, which is included in the Contract Documents.

Performance Bond, Labor and Materialpersons Bond, Deposit of Securities

At or prior to the delivery of the signed Agreement, Contractor shall deliver to the City a Faithful Performance Bond and a Contractor’s Payment (Labor and Materials) Surety Bond, as are required by the Special Provisions. All bonds shall be in the general forms designated by City, and each shall be in an amount equal to one hundred percent (100%) of the contract price. All bonds shall be approved by the City Attorney before the successful bidder may proceed with the work. Failure or refusal to furnish bonds in the form satisfactory to the City Attorney shall subject the bidder to penalties for delay in commencement of the work or revocation of the award of contract.

Pursuant to Section 22300 of the California Public Contract Code, the Contractor will be permitted, at its request and sole expense, to substitute securities for any monies withheld by the City, as provided in the Special Provisions.

Insurance

At or prior to the delivery of the signed Contract Agreement, Contractor shall deliver to the City the policies of insurance and certificates and endorsements that are required by the Special Provisions. Failure or refusal to furnish insurance policies or certificates in the form satisfactory to the City Attorney shall subject the bidder to penalties for delay in commencement of the work or revocation of the Award of Contract. All policies, endorsements, and certificates of insurance shall be approved by the City Attorney before the successful bidder may proceed with any work.

Interpretation of Drawings and Documents Prior to Bidding

If any potential bidder is in doubt as to the true meaning of any part of the Plans, Specifications, or other Contract Documents, or finds discrepancies in, or omissions from the Plans or Specifications, it may submit to the City Engineer a written request for an interpretation or correction thereof not later than five working days before the date bids will be opened. The person submitting the request will be responsible for its prompt delivery. Any interpretation or correction of the Contract Documents will be made only by addendum. Bidders shall confirm the existence of any and all addenda. The City will not be responsible for any other explanation or interpretation of the Contract Documents.

Addenda

Addenda issued during the time of bidding shall become a part of the documents furnished to bidders for the preparation of bids, shall be covered in the bids and shall be made a part of the Contract Documents. Each bid shall include specific acknowledgement in the space provided of receipt of all Addenda issued during the bidding period. Failure to do so may result in the bid being rejected and labeled as nonresponsive. Failure of any bidder to receive such Addenda shall not be grounds for non-compliance with the terms of the instructions. It is the responsibility of the Contractor to contact the City to determine the existence of any and all addenda.

Bidders Interested in More than One Bid

No person, firm or corporation shall be allowed to make or file or be interested in more than one bid for the same work, unless alternate bids are called for. A person, firm or

corporation submitting a sub-proposal to a bidder, or who has quoted prices on materials to a bidder, is not thereby disqualified from submitting a sub-proposal or quoting prices to other bidders.

Special Notice

Bidders are required to inform themselves fully of the conditions relating to construction and labor under which the work will be or is now performed, and, so far as possible, the successful bidder must employ such methods and means in carrying out his/her work as will not cause any interruption or interference with any other Contractor.

List of Subcontractors

Bidders shall submit a list of their proposed subcontractors in compliance with Sections 4100-4113 of the Public Contract Code of the State of California. A form for this designation is furnished in the Contract Documents.

Additional Sureties

If at any time during the continuance of the contract the Sureties, or any of them, shall, in the opinion of City, be no longer responsible, the City shall have the right to require additional and sufficient Sureties which Contractor shall furnish to the satisfaction of City within ten (10) working days after notice.

Definition of Contract Documents

The term "Contract Documents" is defined in section 1.03 Definitions and Terms of the Special Provisions and in the AGREEMENT FOR PUBLIC IMPROVEMENT. The submission of any bid shall be deemed a thorough and complete understanding of all provisions of the Contract Documents.

Business License

All Contractors, whether they are general Contractors or subcontractors, who transact or carry on business in the City, shall acquire a Business License in conformance with the Burlingame Municipal Code. Business licenses can be applied for online at the following link: https://burlingame.hdlgov.com/

Wages

Workers employed in the work must be paid at rates at least equal to the then current prevailing wage scale as determined by the State Director of the Department of Industrial Relations. A copy is on file in the City Department of Public Works, and is also available for review at the State of California Department of Industrial Relations' web site at www.dir.ca.gov/DLSR/PWD.

Pursuant to Labor Code Section 1770 *et. seq*, any Contractor who is awarded a public works project and intends to use a craft or classification not shown on the general prevailing wage determinations, may be required to pay the wage rate of that craft or classification most closely related to it as shown in the general determinations effective at the time of the calls for bids.

Unit Prices

Because unit prices are key elements of bid award and contract administration, in case of discrepancy between the unit price and the total set for a unit basis item, the unit price shall prevail. If, however, the unit price is omitted, ambiguous, unintelligible, or uncertain for any reason, or if it is the same amount as set forth in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail and shall be divided by the estimated quantity to determine the unit price.

GENERAL

MILLS CANYON LANDSLIDE REPAIR PROJECT
CITY PROJECT NO. 86780

_____ ____, 20___

TO THE CITY OF BURLINGAME, CALIFORNIA:

Pursuant to the foregoing Notice to Contractors, the undersigned bidder has reviewed and examined the plans and specifications, and any addenda in their entirety, and hereby states that the firm is qualified to construct the project. The bidder herewith submits its proposal on the Bid Form, Designation of Subcontractors, and Statement of Experience Qualifications, Non-Collusion Declaration, and Statement under Public Contract Code Section 10285.1 attached hereto and made a part hereof, and binds itself on award by the City of Burlingame under this proposal to execute in accordance with such award, a contract, of which this Proposal and the Notice to Contractors, Instructions to Bidders, Special Provisions, Standard Specifications, and Plans and Specifications are hereby made a part of this Proposal and all provisions thereof are hereby accepted.

In submitting this proposal, the bidder has confirmed the existence of any and all addenda and accepts the changes to the contract included in all addenda. The bidder shall include specific acknowledgement in the space provided of receipt of all addenda issued during the bidding period.

The bidder further agrees that in case of its default in executing the Contract Documents, and providing the required bonds and insurance, the cash, check or Bidder's Bond, accompanying its proposal and the money payable thereon shall be and remain the property of the City of Burlingame, as provided in the Instructions to Bidders and the Special Provisions.

Company name: _____

_____
(Corporate Seal)

Signature _____

Address _____

Contractor's license number: _____

Contractor's telephone no. _____

Contractor's facsimile no. _____

If a corporation, organized under the laws of the state of: _____,

Nature of firm (corporation, partnership, etc.) and names of individual members of the firms, or names and titles of officers of the corporation:

Name _____ Title _____

Name _____ Title _____

Name _____ Title _____

Name _____ Title _____

DESIGNATION OF SUBCONTRACTORS

(Public Contract Code Sections 4100 *et seq.*)
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID PROPOSAL
MILLS CANYON LANDSLIDE REPAIR PROJECT
CITY PROJECT NO. 86780

As a bidder on the above-entitled project, the undersigned hereby designates the subcontractors that will perform work or labor or render services to the Contractor in or about the construction of the project in an amount in excess of one-half (1/2) of one percent (1%) of the Contractor's total bid or $10,000 whichever is greater.

The undersigned understands and agrees that should it fail to specify a subcontractor for any portion of the work as above stated, it agrees that the undersigned is fully qualified to perform that portion of the work itself, and that it shall perform that portion itself. Penalties for failure to comply with this provision are provided in the Subletting and Subcontracting Fair Practices Act commencing with Section 4100 of the Public Contract Code.

Pursuant to Public Contract Code Section 6109, Contractor shall not allow or permit any subcontractor that is ineligible to perform work on a public works project pursuant to Labor Code Section 1777.1 or 1777.7, to perform any work on this Project.

The undersigned agrees that it shall not, without written consent of the City Council, make any substitution, assignment or sublet to or of the following list of subcontractors which is made a part of this proposal and then only after compliance with the provisions of the Subletting and Subcontracting Fair Practices Act. [ATTACH ADDITIONAL PAGES IF NECESSARY]

LIST OF SUBCONTRACTORS

NAME OF SUBCONTRACTOR	ADDRESS OF SUBCONTRACTOR	STATE CONTRACTORS LICENSE #	DIR REGISTRATION #	WORK TO BE DONE BY SUBCONTRACTOR

NAME OF BIDDER: _____

Signature: _____

STATEMENT OF EXPERIENCE QUALIFICATIONS

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID PROPOSAL

MILLS CANYON LANDSLIDE REPAIR PROJECT

CITY PROJECT NO. 86780

The following statement as to experience qualifications of the bidder is submitted in conjunction with the Proposal, as a part thereof, and the truthfulness and accuracy of the information is guaranteed by the Bidder.

The bidder has been engaged in the contracting business, under the present business name, for 5 (five) years. Experience in work of a nature similar to that covered in the proposal extends over a period of 5 (five) years.

The bidder, as a contractor, has never failed to satisfactorily complete a contract awarded to it, except as follows:

_____

_____

The following contracts have been satisfactorily completed in the last three years for the persons, firm or authority indicated, and to whom reference is made:

YEAR	TYPE OF WORK PROJECT NAME	CONTRACT AMOUNT	LOCATION	FOR WHOM PERFORMED	CONTACT NAME AND PHONE NO.

The following is a list of plant and equipment owned by the bidder, which is definitely available for use on the proposed work as required:

QUANTITY	NAME, TYPE, CAPACITY	CONDITION	LOCATION

NAME OF BIDDER: _____

Signature: _____

NON-COLLUSION DECLARATION

(PUBLIC CONTRACT CODE SECTION 7106)
TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID PROPOSAL
MILLS CANYON LANDSLIDE REPAIR PROJECT
CITY PROJECT NO. 86780

I, _____, declare under penalty of perjury that I am _____ (sole owner, partner, president, etc.) of _____, the party making the foregoing bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract or anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly, or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare under penalty of perjury that the foregoing is true and correct and this was executed on the date shown below at _____.
(City, State)

Dated: _____

NAME OF BIDDER: _____

Signature _____

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID

MILLS CANYON LANDSLIDE REPAIR PROJECT

CITY PROJECT NO. 86780

In accordance with Public Contract Code Section 10285.1 (Stats. 1985, Ch. 376), the bidder hereby declares under penalty of perjury under the laws of the State of California that the bidder has_____, has not _____ been convicted within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery, collusion, conspiracy, or any other act in violation of any state or federal antitrust law in connection with the bidding upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101, with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of California or the Trustees of the California State University. The term "bidder" is understood to include any partner, member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to in Section 10285.1.

[NOTE: THE BIDDER MUST PLACE A CHECK MARK AFTER "HAS" OR "HAS NOT" IN ONE OF THE BLANK SPACES ABOVE.]

The above Statement is part of the Proposal. Bidders are warned that making a false certification may subject the certifier to criminal prosecution.

I declare under penalty of perjury that the foregoing is true and correct and this was executed on the date shown below at _____.
(City, State)

Dated: _____

NAME OF BIDDER: _____

Signature _____

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID PROPOSAL

In accordance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the following questionnaire:

Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder, ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local government project because of a violation of law or a safety regulation?

No_____ Yes_____

If the answer is yes, explain the circumstances below:

I declare under penalty of perjury that the foregoing is true and correct and this was executed on the date shown below at _____.
(City, State)

Dated: _____

NAME OF BIDDER: _____

Signature _____

Public Contract Code 10232 Statement

In accordance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note: The above Statement and Questionnaire are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

I declare under penalty of perjury that the foregoing is true and correct and this was executed on the date shown below at _____.
(City, State)

Dated: _____

NAME OF BIDDER: _____

Signature _____

California Air Resources Board (CARB) Compliance Statement

In accordance with the California Environmental Protection Agency Air Resources Board (CARB), the Bidder shall provide and attach a copy of the certificate of reported compliance in use off road Diesel Fueled Fleets regulation. (ATTACH CERTIFICATION OF COMPLIANCE)

All contractors and subcontractors will be required to submit with the bid proposal Certificates of Reported Compliance (CRC) which is stored at the California Air Resources Board (CARB) website. Failure to submit this certification may result in a nonresponsive bid.

https://ssl.arb.ca.gov/ssldoors/doors_reporting/doors_login.html

All CRC shall contain an off-road diesel fleet identification number and valid certificate. Contractor shall submit and confirm all CRC have been submitted to the CARB website or have indicated that CARB compliance does not apply to the contractor or subcontractor with a detailed reasoning for said exemption.

If the project is exempt from this requirement state, the reason below:

I declare under penalty of perjury that the foregoing is true and correct and this was executed on the date shown below at _____.
(City, State)

Dated: _____

NAME OF BIDDER: _____

Signature _____

BID SHEET

MILLS CANYON
LANDSLIDE REPAIR
CITY PROJECT NO. 86780

BID SCHEDULE A:

ITEM NO.	ITEM DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT PRICE	ITEM TOTAL
1	Mobilization	1	LS		
2	Erosion Control	1	LS		
3	Construction Staking and Survey	1	LS		
4	Clearing, Grubbing & Vegetation Removal	1	LS		
5	Remove Ex. Wooden Fence	1	LS		
6	Remove Ex Stairs	1	LS		
7	Remove ex. CMU Wall	1	LS		
8	Reinstall Ex. Wooden Fence	1	LS		
9	Install Concrete Valley Gutter	83	LF		
10	Install New Engineered Fill	23	CY		
11	Install Temporary Access Road	1	LS		
12	Install Concrete Cap Beam	76	CY		
13	Install 30’ CIDH Column	385	LF		
14	Install New Backfill	76	CY		
15	Install Hydroseed	375	SY		

MILLS CANYON LANDSLIDE REPAIR
CITY PROJECT NO. 86780 - TOTAL BID, _____

MILLS CANYON
LANDSLIDE REPAIR
CITY PROJECT NO. 86780

Base Bid Item Descriptions:

Bid item No. 1 – Mobilization

The contract lump sum price paid for Mobilization shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved with mobilization including obtaining all bonds, insurance and permits, moving on to the site, moving off of the site; removing, storing and rebuilding fences and protective barriers; construction signage, notification of residents, and all other incidental work required for mobilization and all other work as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 2 - Erosion Control

The contract lump sum price paid for **Erosion Control** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in Erosion and Sediment Control, complete in place, including preparing a stormwater pollution prevention plan, installing inlet protection, installing straw wattles, removal of groundwater, nonhazardous material and waste management, dust control, hazardous material / waste management, spill prevention, vehicle / equipment inspection and cleaning, concrete truck / equipment wash out, paint cleanup, street sweeping, dewatering, recycling, as specified in the Standard Specifications, these special provisions, and these technical specifications, and as directed by the Engineer.

Bid Item No. 3 – Construction Staking and Surveying

The contract lump sum price paid for **Construction Staking and Surveying** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved to provide construction staking under the direction of a professional land surveyor licensed in the State of California, and all other work as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 4 – Clearing, Grubbing & Vegetation Removal

The contract lump sum price paid for **Clearing, Grubbing & Vegetation Removal**, shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved to clear, grub and remove vegetation, complete in place, including trimming trees and bushes, removing ground cover needed to install improvements as shown on the plans, as specified in the Standard Specifications, these special provisions, and these technical specifications, and as directed by the Engineer.

Bid Item No. 5 – Remove Ex. Wooden Fence

The contract lump sum price paid for **Remove Existing Wooden Fence** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in removing the existing wooden fence, complete in place, including sawcutting, jackhammering, drilling, hand digging around tree roots, or excavation of improvements, removal, smoothing and finishing of remaining exposed components, hauling and disposal of materials and all other work as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 6 – Remove Ex. Stairs

The contract lump sum price paid for **Remove Existing Stairs** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in removing the existing wooden stairs, complete in place, including sawcutting, jackhammering, drilling, hand digging around tree roots, or excavation of improvements, removal, smoothing and finishing of remaining exposed components, hauling and disposal of materials and all other work as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 7 – Remove Ex. CMU Wall

The contract lump sum price paid for **Remove Existing CMU Wall** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in removing the existing CMU Wall, complete in place, including sawcutting, jackhammering, drilling, hand digging around tree roots, or excavation of improvements, removal, smoothing and finishing of remaining exposed components, hauling and disposal of materials and all other work as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 8 – Reinstall Ex. Wooden Fence

The contract lump sum price paid for **Reinstalling Existing Wooden Fence** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in reinstalling the wooden fence in kind, complete in place. This includes all materials, labor, jackhammering, drilling, or excavation, hauling and disposal of materials, installing wooden Columns, pouring concrete, setting up the wooden fence at the same location it it was originally, and all other work needed for installing new wooden fence in kind as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 9 – Install Concrete Valley Gutter

The contract price paid per linear foot for **Install Concrete Valley Gutter** shall include full compensation for furnishing all additional labor, materials, tools, equipment, and incidentals above for doing all the work involved in installing new concrete valley gutter. This includes all materials, labor, hand digging around tree roots, or excavation, rough grading, hauling and disposal of materials, placement, and compaction of base, installing concrete form work, installing rebar, pouring concrete and all other work needed as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 10 – Install New Engineered Fill

The price paid for Installing new Engineering Fill includes full compensation for: furnishing all labor, materials, tools, equipment and incidentals; doing all the work involved in installing new engineered fill behind the retaining wall, surface preparation required, backfilling as necessary to set the design grade, import of borrow material as necessary for grading to set design grades as shown on the Plans, and preparation of the sub-grade, compaction, and all other work needed as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 11 – Install Temporary Access Road

The contract lump sum price paid for **Installing Temporary Access Road** shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals and for doing all the work involved in installing a temporary construction Access road, complete in place, including scarifying, grading, and compacting native soils, import of borrow material as necessary for grading to set grades as shown on the Plans, regrade at the completion of the project to restore the site to its original grades, and all other work needed as shown on the plans, and as specified in the Standard Specifications, these special provisions, and these technical specifications, and as directed by the Engineer.

Bid Item No. 12 – Install Concrete Cap Beam

The contract price paid per linear foot for **Install Concrete Cap Beam** shall include full compensation for furnishing all additional labor, materials, tools, equipment, and incidentals above for doing all the work involved in installing new concrete cap beam. This includes all materials, labor, sawcutting, jackhammering, drilling, hand digging around tree roots, or excavation, hauling and disposal of materials, installing concrete form work, installing rebar, pouring concrete, and all other work for installing new concrete beam work as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 13 – Install CIDH Column

The contract price paid per linear foot for **Install CIDH (Cast In Drilled Hole) Column** shall include full compensation for furnishing all additional labor, materials, transportation, tools, equipment, and incidentals above for doing all the work involved in installing CIDH Column. This includes all materials, labor, potholing adjacent wall columns to verify depths, jackhammering, drilling, or excavation, hauling and disposal of materials, installing concrete form work, installing rebar, pouring concrete, and all other work needed for installing new CIDH Columns as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 14 – Install New Backfill

The contract price paid per cubic yard for **Installing new Backfill** includes full compensation for: furnishing all labor, materials, tools, equipment and incidentals; doing all the work involved in installing new backfill behind the CIDH columns including surface preparation, fill import, rough grading, engineered fill placement, compaction, and all other work as needed to install per the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

Bid Item No. 15 – Hydroseed

The contract price paid per square yard for **Hydroseeding** includes full compensation for: furnishing all labor, materials, tools, equipment and incidentals; doing all the work involved in hydroseeding the hills, including but not limited to surface preparation required, spreading hydroseed, installing all other items as needed to help hydroseed establish as shown on the plans, as specified in the Standard Specifications, these special provisions, these technical specifications, and as directed by the Engineer.

END OF BID DESCRIPTIONS

AGREEMENT FOR PUBLIC IMPROVEMENT

MILLS CANYON LANDSLIDE REPAIR PROJECT

THIS AGREEMENT, made in duplicate and entered into in the City of Burlingame, County of San Mateo, State of California on _____, 2024 by and between the CITY OF BURLINGAME, a Municipal Corporation, hereinafter called "City", and _____ a California Corporation, hereinafter called "Contractor."

WITNESSETH:

WHEREAS, City has taken appropriate proceedings to authorize construction of the public work and improvements herein provided for and to authorize execution of this Contract; and

WHEREAS, pursuant to State law and City requirements, a notice was duly published for bids for the contract for the improvement hereinafter described; and

WHEREAS, on _____, after notice duly given, the City of Burlingame awarded the contract for the construction of the improvements hereinafter described to Contractor, which the City found to be the lowest responsive, responsible bidder for these improvements; and

WHEREAS, City and Contractor desire to enter into this Agreement for the construction of said improvements.

NOW, THEREFORE, IT IS AGREED by the parties hereto as follows:

1. Scope of work.

Contractor shall perform the work described in those Contract Documents entitled:

MILLS CANYON LANDSLIDE REPAIR PROJECT.

2. The Contract Documents.

The complete contract between City and Contractor consists of the following documents: this Agreement; Notice Inviting Sealed Bids, attached hereto as Exhibit A; the accepted Bid Proposal, attached hereto as Exhibit B; the specifications, provisions, addenda, complete plans, profiles, and detailed drawings contained in the bid documents titled “Mills Canyon Landslide Repair Project” attached as Exhibit C; the State of California

Standard Specifications 2010, as promulgated by the California Department of Transportation; prevailing wage rates of the State of California applicable to this project by State law; and all bonds; which are collectively hereinafter referred to as the Contract Documents. All rights and obligations of City and Contractor are fully set forth and described in the Contract Documents, which are hereby incorporated as if fully set forth herein. All of the above described documents are intended to cooperate so that any work called for in one, and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents.

3. Contract Price.

The City shall pay, and the Contractor shall accept, in full, payment of the work above agreed to be done, the sum of _____, called the "Contract Price". This price is determined by the lump sum and unit prices contained in Contractor's Bid. In the event authorized work is performed or materials furnished in addition to those set forth in Contractor's Bid and the Specifications, such work and materials will be paid for at the unit prices therein contained. Said amount shall be paid in progress payments as provided in the Contract Documents.

4. Termination

At any time and with or without cause, the City may suspend the work or any portion of the work for a period of not more than 90 consecutive calendar days by notice in writing to Contractor that will fix the date on which work will be resumed. Contractor will be granted an adjustment to the Contract Price or an extension of the Time for Completion, or both, directly attributable to any such suspension if Contractor makes a claim therefor was provided in the Contract Documents.

The occurrence of any one or more of the following events will justify termination of the contract by the City for cause: (1) Contractor's persistent failure to perform the work in accordance with the Contract Documents; (2) Contractor's disregard of Laws or Regulations of any public body having jurisdiction; (3) Contractor's disregard of the authority of the Engineer; or (4) Contractor's violation in any substantial way of any provision of the Contract Documents. In the case of any one or more of these events, the City, after giving Contractor and Contractor's sureties seven calendar days written notice of the intent to terminate Contractor's services, may initiate termination procedures under the provisions of the Performance Bond. Such termination will not affect any rights or remedies of City against Contractor then existing or that accrue thereafter. Any retention or payment of moneys due Contractor will not release Contractor from liability. At the

City's sole discretion, Contractor's services may not be terminated if Contractor begins, within seven calendar days of receipt of such notice of intent to terminate, to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 calendar days of such notice.

Upon seven calendar days written notice to Contractor, City may, without cause and without prejudice to any other right or remedy of City, terminate the Contract for City's convenience. In such case, Contractor will be paid for (1) work satisfactorily completed prior the effective date of such termination, (2) furnishing of labor, equipment, and materials in accordance with the Contract Documents in connection with uncompleted work, (3) reasonable expenses directly attributable to termination, and (4) fair and reasonable compensation for associated overhead and profit. No payment will be made on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.

5. Provisions Cumulative.

The provisions of this Agreement are cumulative and in addition to and not in limitation of any other rights or remedies available to the City.

6. Notices.

All notices shall be in writing and delivered in person or transmitted by certified mail, postage prepaid.

Notices required to be given to the City shall be addressed as follows:

Margaret Glomstad, Director Parks & Recreation Department
City of Burlingame
850 Burlingame Avenue
Burlingame, California 94010
(650) 558-7300

Notices required to be given to Contractor shall be addressed as follows:

Name:
Company Name:
Address:

7. Interpretation

As used herein, any gender includes the other gender and the singular includes the plural and vice versa.

8. Waiver or Amendment.

No modification, waiver, mutual termination, or amendment of this Agreement is effective unless made in writing and signed by the City and the Contractor. One or more waivers of any term, condition, or other provision of this Agreement by either party shall not be construed as a waiver of a subsequent breach of the same or any other provision.

9. Controlling Law.

This Agreement is to be governed by and interpreted in accordance with the laws of the State of California.

10. Successors and Assignees.

This Agreement is to be binding on the heirs, successors, and assigns of the parties hereto but may not be assigned by either party without first obtaining the written consent of the other party.

11. Severability.

If any term or provision of this Agreement is deemed invalid, void, or unenforceable by any court of lawful jurisdiction, the remaining terms and provisions of the Agreement shall not be affected thereby and shall remain in full force and effect.

12. Insurance.

12.1 Time for Compliance. Contractor shall not commence Work under this Agreement until it has provided evidence satisfactory to the City that it has secured all insurance required under this Section. In addition, Contractor shall not allow any subcontractor to commence work on any subcontract until it has provided evidence satisfactory to the City that the subcontractor has secured all insurance required under this Section.

12.2 Minimum Requirements. Contractor shall, at its expense, procure and maintain for the duration of the Agreement insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Agreement by the Contractor, its agents, representatives, employees or subcontractors. Contractor shall also require all of its subcontractors to procure and maintain the same insurance for the duration of the Agreement. Such insurance shall meet at least the following minimum levels of coverage:

(A) Minimum Scope of Insurance. Coverage shall be at least as broad as the latest version of the following: (1) General Liability: Insurance Services Office Commercial General Liability coverage (occurrence form CG 0001); (2) Automobile Liability: Insurance Services Office Business Auto Coverage form number CA 0001, code 1 (any auto); and (3) Workers' Compensation and Employer's Liability: Workers' Compensation insurance as required by the State of California and Employer's Liability Insurance. The policy shall not contain any exclusion contrary to the Agreement, including but not limited to endorsements or provisions limiting coverage for (1) contractual liability (including but not limited to ISO CG 24 26 or 21 29); or (2) cross liability for claims or suits by one insured against another.

(B) Minimum Limits of Insurance. Contractor shall maintain limits no less than: (1) General Liability: $1,000,000 per occurrence and $2,000,000 aggregate for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with general aggregate limit is used including, but not limited to, form CG 2503, either the general aggregate limit shall apply separately to this Agreement/location or the general aggregate limit shall be twice the required occurrence limit; (2) Automobile Liability: $1,000,000 combined single limit for bodily injury and property damage; and (3) Workers' Compensation and Employer's Liability: Workers' Compensation limits as required by the Labor Code of the State of California. Employer's Liability limits of $1,000,000 per accident for bodily injury or disease. Defense costs shall be paid in addition to the limits.

(C) Notices; Cancellation or Reduction of Coverage. At least fifteen (15) days prior to the expiration of any such policy, evidence showing that such insurance coverage has been renewed or extended shall be filed with the City. If such coverage is cancelled or materially reduced, Contractor shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the City evidence of insurance showing that the required insurance has been reinstated or has been provided through another insurance company or companies. In the event any policy of insurance required under this Agreement does not comply with these specifications or is canceled and not replaced, the City has the right but not the duty to obtain the insurance it deems necessary and any premium paid by the City will be promptly reimbursed by Contractor or the City may withhold amounts sufficient to pay premium from Contractor payments. In the alternative, the City may suspend or terminate this Agreement.

(D) Additional Insured. The City of Burlingame, its officials, officers, employees, agents, and volunteers shall be named as additional insureds on Contractor's and its

subcontractors' policies of commercial general liability and automobile liability insurance using the endorsements and forms specified herein or exact equivalents.

12.3 Insurance Endorsements. The insurance policies shall contain the following provisions, or Contractor shall provide endorsements on forms supplied or approved by the City to add the following provisions to the insurance policies:

(A) General Liability. The general liability policy shall include or be endorsed (amended) to state that: (1) using ISO CG forms 20 10 and 20 37, or endorsements providing the exact same coverage, the City of Burlingame, its officials, officers, employees, agents, and volunteers shall be covered as additional insured with respect to the Services or ongoing and complete operations performed by or on behalf of the Contractor, including materials, parts or equipment furnished in connection with such work; and (2) using ISO form 20 01, or endorsements providing the exact same coverage, the insurance coverage shall be primary insurance as respects the City, its officials, officers, employees, agents, and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any excess insurance shall contain a provision that such coverage shall also apply on a primary and noncontributory basis for the benefit of the City, before the City's own primary insurance or self-insurance shall be called upon to protect it as a named insured. Any insurance or self-insurance maintained by the City, its officials, officers, employees, agents, and volunteers shall be excess of the Contractor's insurance and shall not be called upon to contribute with it in any way. Notwithstanding the minimum limits set forth in Section 3.2.11.2(B), any available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as additional insureds pursuant to this Section 3.2.11.3(A).

(B) Automobile Liability. The automobile liability policy shall include or be endorsed (amended) to state that: (1) the City, its officials, officers, employees, agents, and volunteers shall be covered as additional insureds with respect to the ownership, operation, maintenance, use, loading or unloading of any auto owned, leased, hired or borrowed by the Contractor or for which the Contractor is responsible; and (2) the insurance coverage shall be primary insurance as respects the City, its officials, officers, employees, agents, and volunteers, or if excess, shall stand in an unbroken chain of coverage excess of the Contractor's scheduled underlying coverage. Any insurance or self-insurance maintained by the City, its officials, officers, employees, agents, and volunteers shall be excess of the Contractor's insurance and shall not be called upon to

contribute with it in any way. Notwithstanding the minimum limits set forth in Section 3.2.11.2(B), any available insurance proceeds in excess of the specified minimum limits of coverage shall be available to the parties required to be named as additional insureds pursuant to this Section 3.2.11.3(B).

(C) Workers' Compensation and Employer's Liability Coverage. The insurer shall agree to waive all rights of subrogation against the City, its officials, officers, employees, agents, and volunteers for losses paid under the terms of the insurance policy which arise from work performed by the Contractor.

(D) All Coverages. Each insurance policy required by this Agreement shall be endorsed to state that: (A) coverage shall not be suspended, voided, reduced or canceled except after thirty (30) days (10 days for nonpayment of premium) prior written notice by certified mail, return receipt requested, has been given to the City; and (B) any failure to comply with reporting or other provisions of the policies, including breaches of warranties, shall not affect coverage provided to the City, its officials, officers, employees, agents, and volunteers. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the City, its officials, officers, employees, agents and volunteers, or any other additional insureds.

12.4 Separation of Insureds; No Special Limitations; Waiver of Subrogation. All insurance required by this Section shall contain standard separation of insureds provisions. In addition, such insurance shall not contain any special limitations on the scope of protection afforded to the City, its officials, officers, employees, agents, and volunteers. All policies shall waive any right of subrogation of the insurer against the City, its officials, officers, employees, agents, and volunteers, or any other additional insureds, or shall specifically allow Contractor or others providing insurance evidence in compliance with these specifications to waive their right of recovery prior to a loss. Contractor hereby waives its own right of recovery against City, its officials, officers, employees, agents, and volunteers, or any other additional insureds, and shall require similar written express waivers and insurance clauses from each of its subcontractors.

12.5 Deductibles and Self-Insurance Retentions. Any deductibles or self-insured retentions must be declared to and approved by the City. Contractor shall guarantee that, at the option of the City, either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officials, officers,

employees, agents, and volunteers; or (2) the Contractor shall procure a bond guaranteeing payment of losses and related investigation costs, claims and administrative and defense expenses.

12.6 Subcontractor Insurance Requirements. Contractor shall not allow any subcontractors to commence work on any subcontract relating to the work under the Agreement until they have provided evidence satisfactory to the City that they have secured all insurance required under this Section. If requested by Contractor, the City may approve different scopes or minimum limits of insurance for particular subcontractors. The Contractor and the City shall be named as additional insureds on all subcontractors' policies of Commercial General Liability using ISO form 20 38, or coverage at least as broad.

12.7 Acceptability of Insurers. Insurance is to be placed with insurers with a current A.M. Best's rating no less than A-:VIII, licensed to do business in California, and satisfactory to the City.

12.8 Verification of Coverage. Contractor shall furnish City with original certificates of insurance and endorsements effecting coverage required by this Agreement on forms satisfactory to the City. The certificates and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf, and shall be on forms provided by the City if requested. All certificates and endorsements must be received and approved by the City before work commences. The City reserves the right to require complete, certified copies of all required insurance policies, at any time.

12.9 Reporting of Claims. Contractor shall report to the City, in addition to Contractor's insurer, any and all insurance claims submitted by Contractor in connection with the Services under this Agreement.

13. Indemnification.

Contractor shall indemnify, defend, and hold the City, its directors, officers, employees, agents, and volunteers harmless from and against any and all liability, claims, suits, actions, damages, and causes of action arising out of, pertaining or relating to the actual or alleged negligence, recklessness or willful misconduct of Contractor, its employees, subcontractors, or agents, or on account of the performance or character of the services, except for any such claim arising out of the sole negligence or willful

misconduct of the City, its officers, employees, agents, or volunteers. It is understood that the duty of Contractor to indemnify and hold harmless includes the duty to defend as set forth in section 2778 of the California Civil Code. Notwithstanding the foregoing, for any design professional services, the duty to defend and indemnify City shall be limited to that allowed by state law. Acceptance of insurance certificates and endorsements required under this Agreement does not relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply whether or not such insurance policies shall have been determined to be applicable to any of such damages or claims for damages.

IN WITNESS WHEREOF, two identical counterparts of this Agreement, consisting of five pages, including this page, each of which counterparts shall for all purposes be deemed an original of this Agreement, have been duly executed by the parties hereinabove named on the day and year first hereinabove written.

CITY OF BURLINGAME,
a Municipal Corporation

By _____
Lisa K. Goldman, City Manager

CONTRACTOR

By _____
Print Name:
Company Name:

Approved as to form:

_____
Michael Guina, City Attorney

ATTEST:

_____
Meaghan Hassel-Shearer, City Clerk

CITY OF BURLINGAME

DEPARTMENT OF PARKS AND RECREATION

SPECIAL PROVISIONS

FOR

MILLS CANYON LANDSLIDE REPAIR PROJECT
CITY PROJECT NO. 86780

GENERAL CONDITIONS

SECTION 1. DEFINITIONS AND TERMS

1.01 General

The following shall be added to Standard Specifications Section 1-1.01:

The work contemplated herein shall be done in accordance with these Specifications as defined in the Special Provisions Section 1.03, and the Municipal Code of the City of Burlingame, insofar as the same may apply and in accordance with the following Special Provisions.

In the case of conflict between the Standard Specifications and these Special Provisions, the Special Provisions shall take precedence over and be used in lieu of such conflicting portions.

1.02 Abbreviations

Abbreviations of the Standard Specifications shall be amended to include the following:

AIA	American Institute of Architects
APWA	American Public Works Association
ASA	American Standard Association
CSI	Construction Specifications Institute
IAMPO	International Association of Mechanical & Plumbing Officials
ICBO	International Conference of Building Officials
UBC	Uniform Building Code
UPC	Uniform Plumbing Code

1.03 Definitions and Terms

The definitions in Standard Specifications Section 1-1.07B are amended as follows:

As used herein, unless the context otherwise requires, the following terms have the following meanings:

Agency: The legal entity for which the work is being performed.

Authorized Laboratory: The laboratory authorized by the Engineer to test materials and work involved in the contract.

Contract Documents: The Contract Documents shall include the complete contract between City and Contractor, which shall consist of the following documents: the Agreement and Notice Inviting Sealed Bids; the accepted Bid Proposal; the specifications, provisions, addenda, complete plans, profiles, and detailed drawings contained in the bid documents entitled "Mills Canyon Landslide Repair Project, City Project No. 86780"; the State of California Standard Specifications 2010, as promulgated by the California Department of Transportation; prevailing wage rates of the State of California applicable to this project by State law; and all bonds. All rights and obligations of City and Contractor are fully set forth and described in the Contract Documents, which are hereby incorporated as if fully set forth herein. All of the above described documents are intended to cooperate so that any work called for in one, and not mentioned in the other, or vice versa, is to be executed the same as if mentioned in all said documents. In case of any inconsistencies among the various documents, the Agreement shall prevail.

Contract Acceptance: The formal written contract acceptance of an entire contract by the City Council at a regularly scheduled meeting, recorded in the County of San Mateo Recorder's Office, titled "Notice of Completion," signed by an authorized official of the City of Burlingame, which has been completed in all respects in accordance with the plans and specifications and any modification thereof previously approved.

City: The City of Burlingame, State of California.

Department: The Department of Parks and Recreation of the City of Burlingame.

Director: The Director of Parks and Recreation of the City of Burlingame, California.

Engineer: The City Engineer of the City of Burlingame, State of California, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.

Inspector: An inspector employed or retained by the City to perform inspection during construction of the work under the direction of the Director.

Legal Holiday: A holiday as specified in Section 5.04 of these Special Provisions.

Owner: The City of Burlingame, a political subdivision of the State of California.

Plans: Standard plans, revised standard plans and project plans.

1. **Project plans**: Drawings specific to the project, including authorized shop drawings.
2. **Standard plans:** *2010 California Department of Transportation Standard Plans*, *City of Burlingame Standard Details*, and any other local agency or district standard plans or details referenced in project plans.

The California Department of Transportation standard plans are available at:
http://www.dot.ca.gov/hq/esc/oe/construction_standards.html

The City of Burlingame Standard Details are available at:
https://www.burlingame.org/departments/public_works/city_standard_details.php

Specifications: Standard specifications, and special provisions, as follows:

1. **Special Provisions:** Specifications specific to the project. These specifications are in a section titled *Special Provisions* of this bid book titled *Notice to Bidders/Proposal and Agreement/Special Provisions*.

3. **Standard Specifications:** Specifications standard to City construction projects. These specifications are in a book titled State of California Department of Transportation *Standard Specifications 2010* (Standard Specifications or SS). These standard specifications are available at:
www.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2010_StdSpecs/2010_StdSpecs.pdf

Any reference therein to the State of California or a State agency, office or officer, acting under the Standard Specifications shall be interpreted to refer to the City or its corresponding agency, office or officer acting under this contract.

State: In references where context applies to "State" as the owner of the Project, the City of Burlingame.

Supplementary General Conditions: The part of the Contract Documents that makes additions, deletions, or revisions to these General Conditions.

Technical Specifications: Those portions of the Contract Documents consisting of the written technical descriptions of products and execution of the Work.

Work: The entire completed construction required to be furnished under the Contract Documents. Work is the result of performing services, furnishing labor, and furnishing and incorporating materials and equipment into the construction, all as required by the Contract Documents.

*** END OF SECTION ***

SECTION 2. BIDDING

2.01 General

The bidder's attention is directed to the provisions in Section 2, "Bidding," of the Standard Specifications and these Special Provisions for the requirements and conditions which it shall observe in the preparation of the proposal form and the submission of the bid.

The following Sections in the Standard Specifications are deleted:

2-1.15, "Disabled Veterans Business Enterprises".
2-1.18, "Small Business and Non-small Business Subcontracting Preferences".
2-1.27, "California Companies"

2.02 Subcontractor List

Standard Specifications Section 2-1.10, “Subcontractor List,” is replaced by the following:

2-1.10 SUBCONTRACTOR LIST

On the Subcontractor List form, list each subcontractor to perform work in an amount in excess of 1/2 of 1 percent of the total bid or $10,000, whichever is greater (Pub Cont Code § 4100 et seq.).

For each subcontractor listed, the Subcontractor List form must show:

1. Business name and the location of its place of business.
2. California contractor license number for a non-federal-aid contract.
3. Public works contractor registration number
4. Portion of work it will perform.

2.03 Proposal Pages

Standard Specifications Section 2-1.33, “Bid Document Completion” is amended to provide that the bid documents shall include the required proposal pages or copies thereof completed and signed, including Proposal to the City of Burlingame, Designation of Subcontractors, Experience Qualifications, Non-Collusion Declaration, Public Contract Code Compliance Statement and Questionnaire, and Bid Sheet in these Special Provisions.

2.04 Compliance Statement

The Contractor shall complete a statement indicating compliance with Public Works Contracts Code Section 10285.1 and Public Contract Code Section 10162 Questionnaire. These documents shall be completed and included in the Proposal.

2.05 Bidder's Security

Standard Specifications Section 2-1.34, “Bidder’s Security” is replaced with the following:

If Contractor’s bid is greater than $25,000, a Contractor shall submit bid with one of the following forms of bidder's security equal to at least 10 percent of the bid:

1. Cashier's check
2. Certified check
3. Signed bidder’s bond by an admitted surety insurer

A sample bid bond is provided at the end of this Section.

Bidders shall submit a cashier’s check, a certified check, or a bidder’s bond to the City before the bid opening time. The bidder's security shall be made payable to the City of Burlingame.

*** END OF SECTION ***

BIDDER'S BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____ as Principal, and _____ _____ as Surety, are held and firmly bound unto the City of Burlingame, a municipal corporation of the State of California (hereinafter called "City") in the penal sum of ten percent (10%) of the total aggregate amount of the bid of the Principal above named, submitted by said Principal to the City for the work described below, for the payment of which sum in lawful money of the United State, well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents. In no case shall the liability of the Surety hereunder exceed the sum of _____($_____) Dollars.

The condition of this obligation is such that a bid to the City for certain construction specifically described as follows, for which bids are to be opened on _____, _____, 20___, at ___:_____, has been submitted by Principal to City:

NOW THEREFORE, if the Principal is awarded the Contract and within the time and manner required under the Specifications, after the prescribed forms are presented to the Principal for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files two bonds with the City, one to guarantee faithful performance of the Contract and the other to guarantee payment for labor and materials as provided by law as well as files insurance certificates and equal employment opportunity documentation required under the bid, then this obligation shall be null and void; otherwise, it shall remain in full force.

In the event suit is brought upon said bond by City, and judgment is recovered, the Surety shall pay all costs incurred by City in such suit, including a reasonable attorney's fee to be fixed by the Court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals on this day of _____, 20 ____.

_____(Seal)

_____(Seal)

_____(Seal)

_____(Seal)

_____(Seal)

_____

_____

NOTE: Attach notary acknowledgment for signatures of those executing for Principal and Surety

SECTION 3. AWARD AND EXECUTION OF CONTRACT

3.01 General

The bidder's attention is directed to the provisions of Standard Specifications Section 2, "Bidding," and Section 3 "Contract Award and Execution," , and to "Proposal Requirements and Conditions," of these Special Provisions for the requirements and conditions concerning award and execution of the contract, with the following clarifications, changes and additions.

The second paragraph of Standard Specifications Section 3-1.02A, “General,” is replaced with the following:

In the case of unit basis items, the amount set forth under the "Item Total" column shall be the product of the unit price bid and the estimated quantity for the item.
In case of discrepancy between the unit price and the total set forth for a unit basis item, the unit price shall prevail, except as provided in (a) or (b), as follows:

(a) If the amount set forth as a unit price is unreadable or otherwise unclear, or is omitted, or is the same as the amount as the entry in the item total column, then the amount set forth in the item total column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the unit price;

(b) (Decimal Errors) If the product of the entered unit price and the estimated quantity is exactly off by a factor of ten, one hundred, etc., or one-tenth, or one-hundredth, etc. from the entered total, the discrepancy will be resolved by using the entered unit price or item total, whichever most closely approximates percentagewise the unit price or item total in the Agency's Engineer Estimate of cost.

If both the unit price and the item total are unreadable or otherwise unclear, or are omitted, the bid may be deemed irregular. Likewise if the item total for a lump sum item is unreadable or otherwise unclear, or is omitted, the bid may be deemed irregular unless the project being bid has only a single item and a clear, readable total bid is provided.

Symbols such as commas and dollar signs will be ignored and have no mathematical significance in establishing any unit price or item total or lump sums. Cents symbols also have no significance in establishing any unit price or item total because all figures are assumed to be expressed in dollars and/or decimal fractions of a dollar. Written unit prices, item totals and lump sums will be interpreted according to the number of digits and, if applicable, decimal placement. Bids on lump sum items shall be item totals only; if any unit price for a lump sum item is included in a bid and it differs from the item total, the items total shall prevail.

Standard Specifications Section 3-1.02B, “Tied Bids,” is replaced with:

3-1.02B Tied Bids

The Department breaks a tied bid with a coin toss.

Standard Specifications Sections 3-1.08, "Small Business Participation Report,” and 3-1.11, "Payee Data Record,” are deleted.

3.02 Award of Contract

To the fullest extent provided by law, the City reserves the right to waive any irregularities and/or informalities in any bid received.

The award of the contract, if it be awarded, will be to the lowest responsive and responsible bidder whose proposal complies with all the requirements prescribed. Such award, if made, will be made within forty-five (45) days after the opening of the proposals. If the lowest responsible bidder refuses or fails to execute the contract, the City may award the contract to the second lowest responsive and responsible bidder. Such award, if made, will be made within sixty (60) days after the opening of proposals. If the second lowest responsible bidder refuses or fails to execute the contract, the City may award the contract to the third lowest responsive and responsible bidder. Such award, if made, will be made within seventy-five (75) days after the opening of the proposals. The periods of time specified above within which the award of contract may be made shall be subject to extensions for such further periods as may be agreed upon in writing between the City and the bidder concerned.

All bids will be compared on the basis of the Engineer's Estimate of the quantities of work to be done.

3.03 Contract Bonds

Standard Specifications Section 3-1.05, “Contract Bonds (Pub Cont Code Sections 10221 and 10222),” is replaced with the following:

The surety or sureties on all bonds furnished must be approved by the City. Any modifications or alteration made in the plans or specifications shall not operate to release any surety from liability on any bond or bonds herein required to be given. All contract bonds shall be payable to the City of Burlingame and shall reference the project name and number.

All alterations, extensions of time, extra and additional work, and other changes authorized by these specifications or any part of the contract may be made without securing the consent of the surety or sureties on the contract bonds.

(a) Faithful Performance Bond

Contractor shall provide, at the time of the execution of the contract for the work, and at its own expense, a surety bond in an amount equal to at least one hundred percent (100%) of the contract price as security for the faithful performance of the contract.

(b) Contractor's Payment (Labor and Materials) Surety Bond
Contractor shall also provide, at the time of the execution of the contract for the work, and at its own expense, a separate surety bond in an amount equal to at least one hundred percent (100%) of the contract price as security for the payment of all persons performing labor and furnishing materials in connection with this contract; a sample is attached at the end of this section.

(c) Maintenance Bond
The Contractor shall furnish a Corporate Surety Maintenance Bond for faulty workmanship and materials in the amount of ten percent (10%) of the total contract cost. This bond shall be for the term of one year after completion and acceptance of the work and shall be delivered to the Engineer before acceptance of the contract.

3.04 Agreement Execution

The Contractor shall sign and return the contract agreement and furnish required bonds and insurance certificates within ten (10) working days after the date of the letter of Notice of Contract Award. If the insurance and bonds are not provided within this time period, the City may proceed to declare the bid bond forfeited and award the bid to another bidder.

3.05 Return of Proposal Guaranties

Bidders' attention is directed to Standard Specifications Section 3-1.19, "Bidders' Securities."

3.06 Insurance

BIDDERS' ATTENTION IS DIRECTED TO THE INSURANCE REQUIREMENTS BELOW AND IN STANDARD SPECIFICATIONS SECTIONS 3-1.07, "INSURANCE POLICIES," and 7-1.06, "INSURANCE."

IT IS HIGHLY RECOMMENDED THAT BIDDERS CONFER WITH THEIR RESPECTIVE INSURANCE CARRIERS OR BROKERS TO DETERMINE IN ADVANCE OF BID SUBMISSION THE AVAILABILITY OF INSURANCE CERTIFICATES AND ENDORSEMENTS AS PRESCRIBED AND PROVIDED HEREIN. IF AN APPARENT LOW BIDDER FAILS TO COMPLY STRICTLY WITH THE INSURANCE REQUIREMENTS, THAT BIDDER MAY BE DISQUALIFIED FROM AWARD OF THE CONTRACT OR THE AWARD MAY BE REVOKED AND SUFFER LOSS OF BID BOND.

Contractor shall procure and maintain for the duration of the Contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by the Contractor, Contractor's agents, representatives, employees or subcontractors. The cost of such insurance shall be included in the Contractor's bid.

Standard Specifications Section 7-1.06, “Insurance,” is amended to include the following:

(a) Minimum Scope of Insurance

Coverage shall be at least as broad as:

(1) Insurance Services Office form number GL 0002 (Ed. 1/73) covering Comprehensive General Liability and Insurance Services Office form number GL 0404 covering Broad Form Comprehensive General Liability; or Insurance Services Office Commercial General Liability coverage ("occurrence" form GC 0001).

(2) Insurance Services Office form number CA 0001 (Ed. 1/78) covering Automobile Liability, code 1 "any auto" and endorsement CA 0025.

(3) Worker's Compensation insurance as required by the Labor Code of the State of California and Employers Liability insurance.

(b) Minimum Limits of Insurance

Contractor shall maintain limits no less than:

(1) General Liability: $2,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. If Commercial General Liability Insurance or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to this Project/location or the general aggregate limit shall be twice the required occurrence limit.

(2) Automobile Liability: $1,000,000 combined single limit per accident for bodily injury and property damage.

(3) Workers' Compensation and Employers Liability: Worker's compensation limits as required by the Labor Code of the State of California and Employers Liability limits of $1,000,000 per accident.

(c) Deductibles and Self-insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

(d) Other Insurance Provision

The policies are to contain, or be endorsed to contain the following provision:

(1) General Liability and Automobile Liability Coverages

(A) The City of Burlingame, its officers, officials, employees and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor, products and completed operations of the Contractor, premises owned, occupied or used by the Contractor, or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the City of Burlingame, its officers, officials, employees, or volunteers. The endorsement providing this additional insured coverage shall be equal to or broader than ISO Form CG 20 10 11 85 and must cover joint negligence, completed operations, and the acts of subcontractors.

(B) The Contractor's insurance coverage shall be primary insurance as respects the City of Burlingame, its officers, officials, employees, and volunteers. Any insurance or self-insurance maintained by the City of Burlingame, its officers, officials, employees, or volunteers shall be excess of the Contractor's Insurance and shall not contribute with it.

(C) Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the City of Burlingame, its officers, officials, employees, or volunteers.

(D) The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.

(2) Workers' Compensation and Employers Liability Coverage

The insurer shall agree to waive all rights of subrogation against the City of Burlingame, its officers, officials, employees, or volunteers for losses arising from work performed by the Contractor for the City of Burlingame.

(3) All Coverages

Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty days prior written notice by certified mail, return receipt required, has been given to the City of Burlingame.

(e) Acceptability of Insurers

Insurance is to be placed with insurers with a Best's rating of no less than A-:VII and be authorized to conduct business with regard to the profferred lines of insurance in the State of California.

(f) Verification of Coverage

Contractor shall furnish the City with certificates of insurance and with original endorsements effecting coverage required by this clause. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be on forms approved by the City. All certificates and endorsements are to be received and approved by the City before work commences. The City reserves the right to require complete, certified copies of all required insurance policies, at any time.

(g) Subcontractors

Contractor shall include all subcontractors as insureds under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverages for subcontractors shall be subject to all of the requirements stated herein.

*** END OF SECTION ***

CONTRACTOR'S PAYMENT (LABOR AND MATERIALS) SURETY BOND
Sample

WHEREAS, the City Council of the City of Burlingame, State of California ("City") and _____, (hereinafter designated as "Principal") have entered into an agreement dated _____, and identified as _____("Agreement"), which is hereby referred to and made a part here of, whereby Principal agrees to install and complete certain designated public improvements; and

WHEREAS, under the terms of said agreement, Principal is required before entering upon the performance of the work to file a good and sufficient payment surety bond with City to secure the claims to which reference is made in Titles 1 and 3 (commencing with Section 8000) of Part 6 of Division 4 of the Civil Code of the State of California.

NOW, THEREFORE, Principal and _____, as Surety, incorporated under the laws of the State of _____, and duly authorized to transact business as an admitted surety, under the Laws of the State of California, are held and firmly bound unto City in the penal sum of _____ dollars ($_____), this amount being not less than one hundred percent of the total amount payable by the terms of the Agreement per Civil Code section 9554, for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

The condition of this obligation is such that if Principal, Principal's subcontractors, heirs, executors, administrators, successors, or assigns shall fail to pay any of the persons, companies, or corporations, referred to in Section 9100 of the California Civil Code, as amended, with respect to any work of labor performed or materials supplied by any such persons, companies, or corporations, which work, labor, or materials are covered by the above-mentioned agreement and any amendments, changes, change order, additions, alterations, or modifications thereof, or any amounts due under the California Unemployment Insurance Code with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal and its subcontractors pursuant to Section 13020 of the Unemployment Insurance Code, as amended, with respect to such work and labor, the Surety will pay for the same, in an amount not exceeding the sum herein above specified, and also, in case suit is brought upon this bond, the Surety will pay reasonable attorney's fees in an amount to be fixed by the court.

It is hereby expressly stipulated and agreed that this surety bond shall inure to the benefit of any and all persons, companies, and corporations entitled named in Section 9100 of the California Civil Code, as amended, so as to give a right of action to them or their assigns in any suit brought upon this surety bond.

The Surety hereby stipulates and agrees that no amendment, change, change order, addition, alteration, or modifications to the terms of the agreement of the work to be performed thereunder or the specifications accompanying the same, shall in any way affect its obligations on this surety bond, and it does hereby waive notice of any such amendment, change, change order, addition,

alteration, or modification to the terms of the agreement or to the work performed thereunder or to the specifications accompanying the same. Surety hereby waives the provisions of California Civil Code Sections 2845 and 2849.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety above named, on _____, 20___.

PRINCIPAL SURETY

By:_____ By:

_____
Address

NOTE: Attach notary acknowledgement for signatures of those executing for Principal and Surety

FAITHFUL PERFORMANCE BOND

Sample

WHEREAS, the City Council of the City of Burlingame, State of California, and _____ (herein designated as "Principal") have entered into an Agreement whereby Principal agrees to construct and complete certain designated public improvements, which said agreement, dated_____, 20_____, and identified as **PROJECT** # _____, is hereby referred to and made a part hereof: and

WHEREAS, said Principal is required under the terms of said Agreement to furnish a bond of the faithful performance of said Agreement.

NOW, THEREFORE, we, the Principal and _____, as Surety, are held and firmly bound unto the City of Burlingame (hereinafter called "City"), in the penal sum of _____dollars ($_____) lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, successors, executors and administrators, jointly and severally, formally by these presents.

The condition of this obligation is such that if the above bounded Principal, his/her or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions and provisions in the said Agreement and any alteration thereof made as therein provided, on his or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless City, its offices, agents and employees, as therein stipulated, and this obligation shall become null and avoid; otherwise it shall be and remain in full force and effect.

Principal and Surety further agree that upon City's final acceptance of the work, ten percent (10 %) of this bond shall remain in effect to guarantees the repair and/or replacement of defective materials and/or workmanship, one years after City's final acceptance of the work.

As a part of the obligation secured hereby and in addition to the face amount specified therefor, there shall be included costs and reasonable expenses and fees, including reasonable attorney's fees, incurred by City in successfully enforcing such obligation, all to be taxed as costs and included in any judgment rendered.

The Surety hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the agreement or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligations on this bond, and it

does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the agreement or to the work or to the specifications.

IN WITNESS WHEREOF, this instrument has been duly executed by the Principal and Surety above named, on_____20_____.

PRINCIPAL	SURETY
By:_____	By:_____
_____	_____
Address	Address

NOTE: Attach notary acknowledgement for signatures of those executing for Principal and Surety.

SECTION 4. SCOPE OF WORK

4.01 General

Attention is directed to Standard Specifications Section 4, “Scope of Work,” and these Special Provisions.

4.02 Value Engineering

The last paragraph of Section Standard Specifications 4-1.07C, “Value Analysis Workshop.” is replaced with:

> The Contractor will be responsible for all workshop costs. The City will not reimburse Contractor for any associated costs with conducting a value analysis workshop.

Attention is directed to the provisions in Standard Specifications Sections 8-1.04, "Start of Job Site Activities," Section 8-1.05, "Time,” and Section 8-1.10, "Liquidated Damages," and these Special Provisions.

4.03 Increases of More than Twenty-Five Percent (25%) of Engineer’s Estimate

The last paragraph in Standard Specifications Section 9-1.06B, “Increases of More Than Twenty-Five Percent,” is amended to read as follows:

“When the compensation payable for the number of units of an item of work performed in excess of 125 percent of the Engineer’s Estimate, is less than $5,000 at the applicable contract unit price, the Engineer reserves the right to make no adjustment in said price if the Engineer so elects, except that an adjustment may be made if requested in writing by the Contractor.

It is the Contractor’s responsibility to continually analyze and apply the estimated quantities provided in the Contract and to use the knowledge gained from site visits, construction, and professional experience, to update the estimated quantities as the work progresses. If and when the Contractor reaches seventy-five percent (75%) of the estimated quantities of materials required for any portion of the work as specified in the Plans and Specifications and has any reasonable belief that the Contractor will be required to exceed those estimated quantities by more than ten percent (10%), the Contractor shall provide written notice to the Engineer of the possibility and the estimated quantities required to complete the work. If the Contractor fails to provide that written notice before delivering materials in excess of the originally estimated quantities, the Contractor shall not be entitled to any additional compensation or payment for the additional work or materials needed for the additional materials above one hundred and ten percent (110%), but nevertheless shall be required to complete the work.”

4.04 Changes Initiated by the City

The City reserves the right to change the scope of this contract to accommodate budget constraints. The City shall have full authority and discretion to determine the decrease or increase in quantities required as well as the sub-projects that will be altered, added, or deleted. The Contractor shall not be entitled to any additional compensation or adjustment in the unit prices bid because of the above-stated rights.

*** END OF SECTION ***

SECTION 5. CONTROL OF WORK

5.01 General

The control of the work shall be in conformance with Standard Specifications Section 5, “Control of Work,” , except as herein amended.

The following sections in the Standard Specifications are deleted:

Section 5-1.09, "Partnering”
Section 5-1.13C, "Disabled Veteran Business Enterprises"
Section 5-1.13D, "Non-Small Businesses"
Section 5-1.27E "Change Order Bills"
Section 5-1.43E "Alternative Dispute Resolution"

5.02 Coordination and Interpretation of Plans, Specifications and Special Provisions

Standard Specifications Section 5-1.02, “Contract Components,” is replaced with the following:

5-1.02 CONTRACT COMPONENTS

A component in one Contract part applies as if appearing in each. The parts are complementary and describe and provide for a complete work.

If a discrepancy exists:

1. The governing ranking of Contract parts in descending order is:
   - 1.0 Proposal, and Agreement
   - 1.1 Supplementary General Conditions of the Special Provisions
   - 1.2 General Conditions of the Special Provisions
   - 1.3 Technical Specifications of the Special Provisions
   - 1.4 Project plans
   - 1.5 City of Burlingame Standard Details
   - 1.6. Standard Specifications
   - 1.7 (State) Standard Plans
   - 1.8 Supplemental project information
2. Written numbers and notes on a drawing govern over graphics
3. A detail drawing governs over a general drawing
4. A specification in a section governs over a specification referenced by that section

In the event of a discrepancy between units shown on plans, in the special provisions and in the proposal, the units shown in the proposal shall govern.

If a discrepancy is found or confusion arises, submit an RFI.

5.03 Superintendence

Standard Specifications Section 5-1.16, “Representative,” is amended to include the following:

The Contractor's representative shall be available to personally talk to the Engineer within any eight (8) hour period when work is being performed on the project. A telephone number for such purpose shall be given to the Engineer at the start of the project.
The Contractor shall furnish to the Engineer the telephone number of a representative or answering service which will be responsible for responding to emergency calls (e.g., barricade replacement) from the Engineer during non-scheduled working hours.

If the Contractor fails to respond and correct the emergency condition within three (3) hours, and if, in the judgment of the Engineer, correction of the emergency condition should not be deferred until the next regularly scheduled working day, then the Engineer shall have the right to make appropriate arrangements to correct such emergency condition and charge the cost thereof to the Contractor.

5.04 Inspection

The following is added to Standard Specifications Section 5-1.01, "General:" :

The Contractor shall not perform any work during weekend days or City Holidays without the written permission of the Engineer. A fine of $5000 per violation will be deducted from the next progress payment should the Contractor perform unauthorized weekend or Holiday work.

The Contractor shall pay for all inspections required to be performed by City employees due to the scheduling of work by the Contractor between 5:00 P.M. and 8 A.M. on weekdays, and anytime on Saturdays, Sundays and City Holidays, and shall include travel time of the inspector.

City holidays are as follows:

*New Year's Day
*Martin Luther King's Birthday
*President's day
*Memorial Day
*Independence Day
*Labor Day
Columbus Day
*Veteran's Day
*Thanksgiving Day
Day After Thanksgiving
½ Day Christmas Eve
*Christmas Day
½ Day New Year's Eve

*Indicates holidays covered by "Construction Hours" restrictions of these Special Provisions Section 7.02.

Contact the City of Burlingame to determine the specific holiday dates for the current calendar year.

Holidays falling on Saturday or Sunday will be observed on Friday or Monday, respectively.

5.05 Payments to Subcontractors

The following is added to Standard Specifications Section 5-1.13A, ”General,” :

The Contractor shall comply with the provisions in Business and Professions Code Section 7108.5 concerning prompt payment to subcontractors.

The Contractor shall furnish a written statement showing all work to be subcontracted, giving the names and addresses of all subcontractors and a description of each portion of the work to be subcontracted. The Designation of Subcontractors statement shall be on the form furnished by the City as part of the Bid documents and shall be considered an integral part of those documents.

Pursuant to Public Contract Code Section 6109, no contractor or subcontractor that is ineligible under Labor Code Section 1777.1 or 1777.7 may bid or work on this project. Any contract entered into between the Contractor and such an ineligible subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on this project, and any public money that may have been paid to a debarred subcontractor by the Contractor on the project shall be returned to the City. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the project.

5.06 Permits

The Contractor shall obtain all permits, licenses, bonds, pay all charges and fees (including inspection fees); and other authorization required by all affected jurisdictions involved in this job, at its own expense, unless otherwise specified in Supplementary General Conditions of these Special Provisions. The City’s issuance of permits shall not relieve the Contractor of its responsibility as described in this section.

City permits, if required, shall have all fees waived, except for City business licenses. All subcontractors performing work within the limits of the City of Burlingame shall also obtain a City Business Licenses in accordance with these Special Provisions Section 5.07, “City Business License.”

Compliance with NPDES Permit. The Contractor shall comply with all requirements of the permit and shall not, directly or indirectly, cause a sanitary sewer overflow or prevent the City from complying with the requirements of the permit. Penalties imposed on the City as a result of any discharge violation caused by the actions of the Contractor, or its employees, or subcontractors shall be borne in full by the Contractor, including fines, legal fees, and other expenses to the City resulting directly or indirectly from such discharge violations. The City may recover such sums by deduction from the construction progress payments.

5.07 City Business License

The Contractor and all Subcontractors are required to have City business licenses in accordance with the Burlingame Municipal Code. Business license information is available at https://www.burlingame.org/departments/finance/business_license.php

5.08 Engineering Submittals

The following shall be added to Standard Specifications Section 5-1.23A, "General:"

Contractor's failure to make submittals in a timely manner will not be a basis for any time extensions and shall count against the Contractor's work days.

5.09 Project Appearance

The following shall be added to Standard Specifications Section 5-1.31, "Job Site Appearance:"

"PROJECT APPEARANCE. The Contractor shall maintain a neat appearance at the job site.

In any area visible to the public, the following shall apply: when practical, broken concrete and debris developed during the clearing and grubbing shall be disposed of concurrently with its removal. If stockpiling is necessary, the material shall be removed or disposed of weekly, unless otherwise granted by the City.

The Contractor shall furnish portable toilets for workmen and trash bins for all debris from structure construction. All debris shall be placed in trash bins daily. Forms or false work that are to be reused shall be stacked neatly concurrently with their removal. Forms and false work that are not to be reused shall be recycled concurrently with their removal.

5.10 Lines and Grades

Standard Specifications Section 5-1.26, "Construction Surveys," is replaced with the following:

Contractor shall perform all necessary construction surveys. Construction surveys shall be done in accordance with Chapter 12, "Construction Surveys," of the California Department of Transportation's *Survey Manual.*

All work shall be constructed to the lines and grades shown on the contract drawings. Unless authorized by the Engineer, any work done without construction survey line and grade will be done at the Contractor's risk.

5.11 Project Plans

Four (4) full-size sets of the project plans will be supplied to the successful bidder without charge. Additional sets will be supplied at the cost of reproduction.

5.12 Construction Area Lighting

The Contractor shall ensure that all working areas utilized during darkness are lighted to conform to the minimum illumination intensities established by California Division of Occupational Safety and Health Construction Safety Orders. In addition, the Contractor shall ensure that the lighting provides adequate safety to pedestrians in permitted portions of the construction area.

All lighting fixtures shall be mounted and directed in a manner precluding glare to approaching traffic.

5.13 Areas for Contractor's Use

The second and third paragraphs of Standard Specifications Section 5-1.32, "Areas of Use," are replaced with the following:

> If no City-owned or City-secured area is designated on the plans for the Contractor's use, the Contractor will be responsible to secure additional staging/stockpiling areas at Contractor's own expense in order to perform the work.
>
> The Contractor shall defend, indemnify, and hold the City harmless for any damage to or loss of materials or equipment in conformance with the indemnification requirements in the City's construction agreement.

5.14 Nonhighway Facilities

Standard Specifications Section 5-1.36D, "Nonhighway Facilities." is amended to include the following:

> Unless otherwise permitted by the Engineer, the Contractor shall conduct its operations in a manner which will permit continuous operation of all utility facilities. The Contractor shall contact Underground Services Alert (USA) at 811 or 800-642-2444 at least forty-eight (48) hours before excavation so that underground facilities may be marked in the field. Locations of existing utility mains and utility connections, if shown on the plans, are only approximate. The Engineer assumes no responsibility for accuracy or completeness of said data, which is offered solely for the convenience of the Contractor. If the Contractor finds that a known utility has not marked the job site with either locations or no facilities, Contractor shall be responsible for contacting the utility, or USA regarding the discrepancy before proceeding with work.
>
> Attention is directed to the possible existence of underground main or trunk line facilities not indicated on the plans or in the special provisions. The Contractor shall ascertain the exact location of underground main or trunk lines whose presence is indicated on the plans or in the special provisions, the location of their service laterals or other appurtenances and of existing service lateral or appurtenances of any other underground facilities which can be inferred from the presence of visible facilities such as buildings, meters and junction boxes prior to doing work that may damage any of such facilities or interfere with their service.
>
> If the Contractor discovers underground main or trunk lines not indicated on the Plans or in the special provisions, it shall immediately give the Engineer and the Utility Company written

notification of the existence of such facilities. Such mains or trunk lines shall be located and protected from damage as directed by the Engineer and the cost of such work will be paid for as extra work as provided in Section 4-1.05. Damage due to the Contractor's failure to exercise reasonable care shall be repaired at its cost and expense.

5.15 Acceptance of Contract

Standard Specifications Section 5-1.46, "Inspection and Contract Acceptance," is amended to include the following:

However, nothing in this Section 5-1.46 shall be construed to relieve the Contractor of full responsibility for correcting or replacing defective work or materials found at any time before the expiration of the one-year maintenance bond required under Section 3.03 of these Special Provisions.

5.16 Availability of Plans

Contractor shall maintain on the job site at a specific location an official set of Contract Documents, readily available at all times to the Engineer or Inspector.

*** END OF SECTION ***

SECTION 6. CONTROL OF MATERIALS

6.01 General

Attention is directed to Standard Specifications Section 6, "Control of Materials," and these Special Provisions.

6.02 City-Furnished Materials

City-furnished materials shall be furnished in conformance to Standard Specifications Section 6-1.02 and as described herein.

The Contractor shall submit a written request to the Engineer for materials at least forty-eight (48) hours in advance of the date and time of their intended use. The request shall state the quantity and type of each material. Unless otherwise specifically provided in the Special Provisions, City-furnished materials will be stored at the City Corporation Yard at 1361 North Carolan Avenue, Burlingame. Materials will be available for pickup on weekdays, holidays excepted, from 8:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 4:30 p.m.

All City-furnished materials that are not used on the project shall remain the property of the City and shall be returned to the City in as-furnished condition at the locations designated by the Engineer.

Any water use from fire hydrants shall be metered. A cash deposit shall be posted at the City Water Department Office at 501 Primrose Road, Burlingame, California, as assurance that the meter is returned in good condition. Meters shall be obtained from and returned to the Water Department Repair Shop at the City Corporation Yard at 1361 North Carolan Avenue, Burlingame, California,. If the meter is returned in good condition, a refund shall be mailed to the Contractor. Contractor shall also pay for the amount of water used. Water drawn from the City-furnished meter shall only be used for this project.

Any damage to the meters while in the Contractor’s possession shall be its responsibility and deductions will be made from the deposit for repairs to the meters. Meters must be returned to the City within 10 working days after work is completed and payment made for water used prior to final payment.

6.03 Local Materials

The second paragraph of Standard Specifications Section 6-2.04, “Local Materials,” is replaced with the following:

> Testing of local materials to be used in the work for compliance with the specifications will be at the Contractor’s expense.

6.04 Buy America

Standard Specifications Section 6-2.05, “Buy America,” is deleted, unless this is a federally-funded contract.

6.05 Specific Brand or Trade Name and Substitution

Standard Specifications Section 6-3.02, “Specific Brand or Trade Name and Substitution,” is amended to include the following:

The City Engineer’s decision to accept substitution is final.

*** END OF SECTION ***

SECTION 7. LEGAL RELATIONS AND RESPONSIBILITY

7.01 General

This section shall conform to Standard Specifications Section 7, "Legal Relations and Responsibility to the Public," with the following clarifications and amendments. The Contractor is responsible for protecting both its work and the public.

7.02 Construction Hours

Contractor shall not (including excavation and grading) work other than between the hours of 8:00 A.M. and 5:00 P.M. on weekdays (see Section 5.04 of these specifications), except in the case of urgent necessity in the interest of public health and safety, and then only with express permission of the Director. In the vicinity of any schools, the contractor shall not begin any operation until after 9:00 A.M. when school is in session.

7.03 Excavation Safety

Standard Specifications Section 7-1.02K(6)(b), "Excavation Safety," is amended to include the following:

If required the Contractor shall submit a trenching and shoring plan signed and stamped by a license civil engineer or licensed geotechnical engineer for approval by the City. The plan shall include trenching and shoring support calculations.

Designate a competent person to be on site at all times while trench excavation work is being performed. The competent person shall be certified and make daily inspection in accordance with all OSHA requirements. A competent person means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Additionally, the Contractor shall provide upon request by the Engineer calculations and details proving the adequacy of any proposed steel plate trench or excavation bridging to carry traffic loads.

The Contractor shall comply with Public Contract Code § 7104 while excavating.

7.04 Assignment of Antitrust Actions

The Contractor's attention is directed to Standard Specifications Section 7-1.02L(2), "Antitrust Claims."

7.05 Highway Construction Equipment

Attention is directed to Standard Specifications Section 7-1.02O, "Vehicle Code."

7.06 Sound Control Requirements

Sound control shall conform to the provisions of Standard Specifications Section 14-8, "Noise and Vibration," and these special provisions.

The Contractor shall keep noise pollution due to construction activities as low as possible. In no case shall noise levels produced by the Contractor exceed either of the following maximums:

A. No individual piece of equipment shall produce a noise level exceeding 85dBA at a distance of 25 feet.

B. The noise level at any point outside of the property line or temporary construction area shall not exceed 85dBA. No equipment violating these standards will be allowed to operate.

In no case shall the Contractor's operations violate the noise ordinance (Municipal Code Chapter 10.40).

This noise level requirement shall apply to all equipment on the job or related to the job, including, but not limited to, trucks, transit mixers or transient equipment that may or may not be owned by the Contractor. The use of loud signals shall be avoided in favor of light warnings, except those required by safety laws for the protection of personnel.

7.07 Relations with Property Owners

The Contractor shall notify, in writing, property owners or residents at least forty eight (48) hours in advance of all work affecting access into and out of their property or place of business.

Forms for such notices will be provided to the Contractor at start of construction and shall be distributed to the property owners by the Contractor throughout the length of the Contract, whenever appropriate.

Concrete pouring shall be scheduled to re-open new and replace concrete driveways within seventy-two (72) hours after being closed.

Access to any place of business shall be maintained at all times and shall be coordinated with the business owner. Complete closure of any business access shall be only as approved in writing by the Engineer.

7.08 Public Convenience

Section 7-1.03 "Public Convenience" shall be amended by adding the following:

Attention is directed to Section 7 of the Standard Specifications regarding the fact that the Contractor is responsible for protecting both its work and the public.

The Contractor shall conduct his operations in a manner to minimize inconvenience to the homeowners, residents and the traveling public.

Closed driveways shall be re-opened for safe passage of vehicle and pedestrians by end of the each work shift.

Closed driveways during working hours shall be reopened temporarily as requested by property owners or residents to allow access to their driveways. The Contractor shall re-open the closed driveway within ten minutes (10) of such request.

Access to any place of business shall be maintained at all times and shall be coordinated with the business owner. Complete closure of any business access shall be only as approved in writing by the Engineer.

The Contractor shall conduct his operations in a manner to minimize inconveniences to property owners and residents and to avoid damage on private property. The Contractor shall maintain property owner and resident access to the homes at all times. The Contractor shall keep the work site on the private property in a tidy and neat manner. The Contractor shall remove all tools, equipment and material from the property at the end of each workday.

7.09 Indemnification

Contractor shall indemnify, defend, and hold the City, its directors, officers, employees, agents, and volunteers harmless from and against any and all liability, claims, suits, actions, damages, and causes of action arising out of, pertaining or relating to the actual or alleged negligence, recklessness or willful misconduct of Contractor, its employees, subcontractors, or agents, or on account of the performance or character of the services, except for any such claim arising out of the sole negligence or willful misconduct of the City, its officers, employees, agents, or volunteers. It is understood that the duty of Contractor to indemnify and hold harmless includes the duty to defend as set forth in section 2778 of the California Civil Code. Notwithstanding the foregoing, for any design professional services, the duty to defend and indemnify City shall be limited to that allowed by state law. Acceptance of insurance certificates and endorsements required under this Agreement does not relieve Contractor from liability under this indemnification and hold harmless clause. This indemnification and hold harmless clause shall apply whether or not such insurance policies shall have been determined to be applicable to any of such damages or claims for damages.

*** END OF SECTION ***

SECTION 8. PROSECUTION AND PROGRESS

8.01 General

Prosecution and progress shall conform to Standard Specifications Section 8, “Prosecution and Progress,” and these Special Provisions.

8.02 Progress Schedule

The work to be done shall be performed in stages to minimize the inconvenience to the public.

The Contractor shall develop and maintain the appropriate level critical path method schedule for this project in compliance with Standard Specifications Section 8-1.02, “Schedule.” In addition to the required schedule reports to be submitted to the City in accordance with Standard Specifications Section 8-1.02, “Schedule,” the Contractor shall maintain and furnish to the Engineer on a weekly basis a “three week look ahead” report detailing planned work for the following three weeks, highlighting critical path items of work.

8.03 Start of Job Site Activities

The Contractor shall sign and return the Contract Documents and furnish required bonds and insurance certificates within ten (10) working days after the date of the Notice of Contract Award. If the insurance and bonds are not provided within this time period, the City may declare the bid bond forfeited and award the bid to another bidder. Alternatively, the City may begin to count the elapsed time as “working days” under the Agreement.

The Contractor shall be able to begin work within fifteen (15) calendar days after receiving notice that the Contract has been approved by the City of Burlingame and shall diligently prosecute the same to completion before the expiration of the number of working days as set forth in the "Notice to Bidders." The "Notice to Proceed" shall indicate the "Beginning of Work" date to be used to determine the date of completion.

The “Notice to Proceed” will be given at the preconstruction meeting and will indicate the “Beginning of Work” date to be used to calculate the date of completion.

Even though the counting of working days may have begun, the Contractor shall not begin work before the preconstruction conference. The Contractor shall furnish all specified submittals to the Engineer at, or prior to, the preconstruction conference and shall obtain all specified approvals contained in the Standard Specifications and these Special Provisions prior to the beginning of job site activities.

8.04 Liquidated Damages

The Contractor’s attention is directed to the Supplementary General Conditions for Liquidated Damages.

8.05 Contractor’s Control Termination

The Contractor’s attention is directed to Standard Specifications Section 8-1.13, "Contractor’s Control Termination" and these Special Provisions.

If the Contractor's control of the work is terminated or it abandons the work and the contract work is completed in conformance with the provisions of Section 10255 of the Public Contract Code, any dispute concerning the amount to be paid to the City by the Contractor or its surety, under the provisions of Section 10258 of said Act, shall be subject to arbitration in accordance with the section of these special provisions entitled "Arbitration." The surety shall be bound by the arbitration award and is entitled to participate in such arbitration proceedings.

8.06 As-Built Data

The Contractor shall submit all information to the Engineer before project acceptance, including legible marked up plans of what was constructed, as required by the Engineer to verify as-built drawings for all permanent project work.

*** END OF SECTION ***

SECTION 9. MEASUREMENT AND PAYMENT

9.01 General

Measurement and payment shall be in conformance with these specifications in Section 9, "Payment," of the Standard Specifications and these Special Provisions.

Contractors' attention is directed to Standard Specifications Section 9-1.03, "Payment Scope," and as amended herein.

The fourth paragraph in Standard Specifications Section 9-1.03, "Payment Scope," is as follows:

> Full compensation for work specified in divisions I, II and X of the Standard Specifications, and in Sections 1 and 2 of these special provisions is included in the payment for the bid items unless:
>
> 1. Bid item for the work is shown on the Bid Item List.
> 2. Work is specified as change order work.

When an (F) is included after a bid item name on the Bid List, that bid item quantity is a final pay item.

The Contractor shall agree that the approximate quantities shown in the Bid Item List are solely for the purpose of comparing bids. The Contractor's compensation will be computed upon the basis of the actual quantities of work marked by the Engineer and completed, whether they be more or less than those shown in the Bid Item List.

Linear measurement shall be determined from measurements of bid items complete and in place. Unit counts will be made of the unit items complete and in place. Weight measurements will be based on weight receipts issued by a qualified weight master. Any other method of establishing the quantities not listed specifically herein, or defined in other portions of the contract provisions, shall be determined by referring to the applicable section of the Standard Specifications.

9.02 Payment Adjustments for Price Index Fluctuations

Standard specifications Section 9-1.07, "Payment for Adjustments for Price Index Fluctuations," is deleted, unless otherwise specified in the Supplementary Conditions.

9.03 Lump Sum Bid Item Progress Payments

The first paragraph of Standard Specification Section 9-1.16B, "Schedule of Values," is amended to include the following:

> If a schedule of values is not specified to be submitted or a payment breakdown is not provided in the payment clause of the applicable Standard Specifications or these Special Provisions, progress payments for lump sum bid items will be a percentage of the lump sum bid item price based on the Engineer's determination of the amount of lump sum work already performed.

At Contractors option, submit a lump sum breakdown that provides sufficient detail for the Engineer to determine the value of work performed. The Engineer may consider but not exclusively base the determination of progress payments on Contractors lump sum breakdown. The Engineer's determination of progress payments for lump sum bid items under the Contract will be final in accordance with Standard Specifications Section 5-1.03.

9.04 Materials On-Hand

Standard Specifications Section 9-1.16C, "Materials on Hand," is replaced by the following:

No partial payment will be made for any materials on hand which are furnished but not incorporated in the work.

9.05 Mobilization

Standard Specifications Section 9-1.16D, "Mobilization," is replaced with the following:

9-1.16D Mobilization

Public Contract Code Section 10104 defines "mobilization." The Contractor is eligible for partial payments for mobilization if the Contract includes a bid item for mobilization. The Department will make partial payments no less often than as specified under Public Contract Code Section 10264. If the Contract does not include a mobilization bid item, mobilization is included in the payment for the various bid items.

9.06 Retentions

Standard Specifications Section 9-1.16F, "Retentions," is replaced with the following:

9-1.16F Retentions

The City shall retain 5 percent of the estimated value of the work done and 5 percent of the value of materials so estimated to have been furnished and delivered and unused or furnished and stored as aforesaid as part security for Contractors fulfillment of the contract.

Pursuant to Public Contract Code Section 22300, the Contractor will be permitted, at its request and sole expense, to substitute securities for any monies withheld by the City to ensure performance under the contract. Said securities will be deposited either with the City or with the state or federally chartered bank as escrow agent. Securities eligible for this substitution are those listed in Government Code Section 16430 or bank or savings and loan certificate of deposit, interest-bearing demand deposit accounts, standby letters of credit, or any other mutually agreed to by Contractor and the City. The Contractor shall be the beneficial owner of any securities substituted for monies withheld and shall receive any interest thereon.

9.07 Progress Payments

On or before the first day of every month the Contractor and Engineer shall meet and prepare a written estimate of progress payments. From this amount, five percent (5%) will be deducted and, from the remaining ninety five percent (95%), there will be deducted any amounts due City from Contractor for supplies, materials, services, damages or otherwise deductible under the terms of the contract and the amount of all payments previously made to Contractor. The remainder will be paid by the City to the Contractor as a progress payment by the 20th day of the month. The remaining five percent (5%) thereof shall be paid to Contractor thirty-five (35) days after the recording of the Notice of Completion.

Pursuant to Public Contract Code Section 20104.50, the City will promptly process all requests for progress payments pursuant to this contract. As to any undisputed payments that are made more than thirty (30) days after receipt of an undisputed and properly submitted payment request from the Contractor, the City will pay interest equivalent to the legal rate set forth in Code of Civil Procedure Section 685.10.

9.08 Final Payment After Contract Acceptance

Standard Specifications Section 9-1.17D (1), "General" is amended to include the following:

Upon satisfactory completion of the entire work, the Engineer will recommend the acceptance of the work to the City Council. If the City Council accepts the completed work, it will cause a Notice of Completion to be recorded with the County Recorder.

Thirty-five days after the filing of the Notice of Completion, the Contractor will be entitled to the balance due for the completion and acceptance of the work, if certification is made by sworn written statement that all claims have been filed with the City based upon acts or omissions of the Contractor and that no liens or withhold notices have been filed against said work or the property on which the work was done.

9.09 Claim Resolution

Any claim by the contractor in connection with this project shall be resolved pursuant to Section 9204 of the Public Contract Code; the full text of which is as follows:

SECTION 1. Section 9204 is added to the Public Contract Code, to read:

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.

(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.

(c) For purposes of this section:

(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:

(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.

(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.

(C) Payment of an amount that is disputed by the public entity.

(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.

(3)

(A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.

(B) "Public entity" shall not include the following:

(i) The Department of Water Resources as to any project under the jurisdiction of that department.

(ii) The Department of Transportation as to any project under the jurisdiction of that department.

(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.

(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.

(v) The Military Department as to any project under the jurisdiction of that department.

(vi) The Department of General Services as to all other projects.

(vii) The High-Speed Rail Authority.

(4) "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.

(5) "Subcontractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.

(d)

(1)

(A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.

(B) The claimant shall furnish reasonable documentation to support the claim.

(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.

(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.

(2)

(A) If the claimant disputes the public entity's written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.

(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation

is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.

(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.

(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.

(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties' dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.

(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.

(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.

(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.

(g) This section applies to contracts entered into on or after January 1, 2017.

(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.

9.10 Adjustment of Overhead Costs

Irrespective of the final payment to be made to the Contractor under this contract, there will be no adjustment of overhead costs.

9.11 Damages

Any provision in the Contract which limits the City's liability to an extension of time for delay for which the City is responsible and which delay is unreasonable under contemplation of the circumstances involved, and not within the parties', shall not be construed to preclude the recovery of damages by the Contractor or subcontractor. This section shall not be construed to void any provision in this Contract which requires notice of delays, provides for arbitration or other procedure for settlement, or provides for liquidated damages.

9.12 Compensation for General Conditions and Supplementary General Conditions

Compensation for doing any work under the General and Supplementary General Conditions shall be included in the various items of work, and no additional payment shall be made.

*** END OF SECTION ***

SECTION 10. MAINTAINING TRAFFIC

10.01 General

Attention is directed to Section 7-1.03, "Public Convenience," 7-1.04, "Public Safety," and Section 12, "Temporary Traffic Control," of the Standard Specifications. Nothing in these General Conditions shall be construed as relieving the Contractor from its responsibility as provided in said Section 7-1.09.

The Contractor is responsible for posting "No Parking" signs which will be furnished by the City, including "Hooding" or otherwise posting on all parking meters in the areas of work.
The Contractor shall clean all construction area sign panels at the time of installation.

To properly provide for changing traffic conditions and damage caused by public traffic or otherwise, the Contractor shall be prepared to furnish on short notice additional portable signs and sign mounting devices. The Contractor shall maintain an inventory of the commonly required items at the jobsite or shall make arrangements with a supplier who is able, on a daily basis, to furnish such items on short notice.

10.02 Portable Delineators

When work is in progress in a trench or other excavation adjacent to the traveled way, portable delineators, conforming to Section 12-3.04, "Portable Delineators," of the Standard Specifications, shall be placed on the edge of pavement. At other times, the portable delineators shall be placed off of and adjacent to the edge of pavement. The portable delineators shall be spaced as necessary for proper delineation. The spacing between delineators shall not exceed one hundred feet (100') on tangents or fifty feet (50') on curves.

10.03 Lane Closures

A traffic control system shall consist of closing traffic lanes in accordance with the details shown on the Traffic Control Plan, the provisions in Section 12, "Temporary Traffic Control," of the Standard Specifications and the following requirements.

No work shall be allowed to begin before closing any intersection or street. A "Road Closed Ahead" sign, mounted on a sturdy mounting device, shall be placed at the far end of every block converging on that intersection or street.

If any component in the traffic control system is displaced, or ceases to operate or function as specified, from any cause, during the progress of the work, the Contractor shall immediately repair said component and shall restore the component to its original location.

When lane closures are made for work periods only, at the end of each work period, all components of the traffic control system, except portable delineators placed along open trenches or excavation adjacent to the traveled way, shall be removed from the traveled way and shoulder.

10.04 Parked Vehicles

Personal vehicles of the Contractor's employees shall not be parked on the traveled way or shoulders, including any section closed to public traffic.

The Contractor shall notify the Engineer of its intent to begin work at least five (5) days before work is begun. The Contractor shall cooperate with the Engineer relative to handling traffic through the area and shall make its own arrangements relative to keeping the working area clear of parked vehicles.

Whenever vehicles or equipment are parked on the shoulder within 6 feet of a traffic lane, the shoulder area shall be closed with fluorescent traffic cones or portable delineators placed on a taper in advance of the parked vehicles or equipment and along the edge of the pavement at twenty-five-foot (25') intervals to a point not less than twenty-five feet (25') past the last vehicle or piece of equipment. A minimum of nine (9) cones or portable delineators shall be used for the taper. Contractor's warning signage and markings shall conform to the requirements of the Caltrans Traffic Manual, and in any event, a C23 (Road Work Ahead) or C24 (Shoulder Work Ahead) sign shall be mounted on a telescoping flag tree with flags prior to the taper.

10.05 Traffic Control

The Contractor shall provide and erect such warning lights, directional signs and barriers as are necessary to prevent accidents and avoid damage or injury to passing traffic. The Contractor shall comply with Section 12 of the Standard Specifications.

Full compensation for all traffic control, including any flagging costs, shall be considered as included in the bid schedule.

Minor deviations from the requirements of this section concerning hours of work which do not significantly change the cost of the work may be permitted upon the written request of the Contractor if, in the opinion of the Engineer, public traffic will be better served and the work expedited. Such deviations shall not be adopted until the Engineer has indicated written approval. All other modifications will be made by contract change order.

The Contractor shall prosecute the work in such a manner as not to damage any private property. All equipment and material shall be stored by the Contractor off the traveled way during non-working hours. Should any such structures or property be damaged during the operations of the Contractor, it shall immediately notify the proper owners or authorities and shall arrange for the immediate repair of same at its expense.

(A) Driveway Entrance Road Access

The Contractor's attention is directed to the fact that access to all driveways and entrance roads shall be maintained at all times, except during the time such driveways or entrance roads are being resurfaced as part of this contract. The Contractor shall provide the Engineer and the affected property occupants with written notice five (5) days in advance of beginning such driveway or entrance road resurfacing work, and shall complete such resurfacing work and restore vehicular access to each driveway or entrance road within six (6) hours after commencement of such resurfacing work. Forms of such notice of driveway closure will be provided to the Contractor at

start of construction and shall be distributed to the property owner by the Contractor through the length of the contract, whenever appropriate.

Compensation for distributing such written notice shall be considered as included in the appropriate contract bid item necessitating the closure, and no additional compensation will be allowed therefor.

(B) Pedestrian Facilities

Existing pedestrian facilities shall be maintained in a safe condition through construction areas within the Project right of way at all times. In local residential areas the requirement for paved walkway area may be waived if other suitable and safe surface is available and is approved by the Engineer. However, all pedestrian facilities provided through or around construction areas shall be accessible for persons with disabilities in conformance with the requirements of the Americans with Disabilities Act and implementing laws and regulations.

(C) Temporary Steel Plate Bridging with Non-Skid Surface

When backfilling operations of an excavation in the traveled way, whether transverse or longitudinal, cannot be properly completed within a work day, steel plate bridging with a nonskid surface and shoring may be required to preserve unobstructed traffic flow. In such cases, the following conditions shall apply:

1. Steel plates used for bridging must extend a minimum of 12" (305 mm) beyond the edges of the trench.
2. Steel plate bridging shall be installed to operate with minimum noise.
3. The trench shall be adequately shored to support the bridging and traffic loads.
4. Temporary paving with cold asphalt concrete shall be used to feather the edges of the plates, if plate installation by Method (2) described below, is used.
5. Bridging shall be secured against displacement by using adjustable cleats, shims, or other devices.

Steel plate bridging and shoring shall be installed using either Method (1) or (2):

1) Method 1 [For speeds greater than 45 mph (70 Km /hr)]: The pavement shall be cold planed to a depth equal to the thickness of the plate and to a width and length equal to the dimensions of the plate.

2) Method 2 [For speeds less than 45 mph (70 Km/hr)]: Approach plate(s) and ending plate (if longitudinal placement) shall be attached to the roadway by a minimum of 2 dowels pre-drilled into the corners of the plate and drilled 2" (50 mm) into the pavement. Subsequent plates are butted to each other. Fine graded asphalt concrete shall be compacted to form ramps, maximum slope 8.5 % with a minimum 12" (305 mm) taper to cover all edges of the steel plates. When steel plates are removed, the dowel holes in the pavement shall be backfilled with either graded fines of asphalt

concrete mix, concrete slurry or an equivalent slurry that is satisfactory to the Caltrans' representative.

Contractor is responsible for maintenance of the steel plates, shoring, and asphalt concrete ramps.

Unless specifically approved by the Engineer, use of steel plate bridging over the width of the open pipe trench should not exceed four (4) consecutive working days in any given week.

Backfilling of excavations shall be covered with a minimum 3" (75 mm) temporary layer of cold asphalt concrete.

The following table shows the advisory minimal thickness of steel plate bridging required for a given trench width (A-36 grade steel, designed for HS20-44 truck loading per Caltrans Bridge Design Specifications Manual).

Trench Width Minimum Plate Thickness

1) Span < 10" the minimum plate thickness is (0.25 m) ½" (13 mm)
2) Span > 10” < 1'-11" the minimum plate thickness is (0.58 m) 3/4" (19 mm)
3) Span > 1'-11" < 2'-7" the minimum plate thickness is (0.80 m) 7/8" (22 mm)
4) Span > 2'-7" < 3'-5" the minimum plate thickness is (1.04 m) 1" (25 mm)
5) Span > 3'-5" < 5'-3" the minimum plate thickness is (1.60 m) 1 1/4" (32 mm)

NOTE: For spans greater than 5'-3" (1.6 meters), a structural design shall be prepared by a California registered civil engineer.

All steel plates within the right-of-way whether used in or out of the traveled way shall be without deformation. Inspectors can determine the trueness of steel plates by using a straight edge and any plate that is permanently deformed shall be rejected.

Steel plates used in the traveled portion of the highway shall have a surface that was manufactured with a nominal Coefficient Of Friction (COF) of 0.35 as determined by California Test Method 342 (See Appendix H). If a different test method is used, Contractor may utilize standard test plates with known coefficients of friction available from each Caltrans District Materials Engineer to correlate skid resistance results to California Test Method 342. Based on the test data, Contractor shall determine what amount of surface wear is acceptable, and independently ascertain when to remove, test, or resurface an individual plate.

A Rough Road sign (W33) with black lettering on an orange background may be used in advance of steel plate bridging. This sign is used along with any other required construction signing.

Surfacing requirements are not necessary for steel plates used in parking strips, on shoulders not used for turning movements, or on connecting driveways, etc., not open to the public.

10.06 Contractor Representative

As specified here and in Section 5.03 of these specifications, the Contractor shall be represented at all times during working operations.

One person at the work site shall be designated as having responsibility for carrying out directions from the Engineer.

10.07 Portable Flashing Beacons

Portable flashing beacons conforming to the provisions in Section 12, " Temporary Traffic Control," of the Standard Specifications shall be furnished, placed and maintained at the locations as directed by the Engineer.

If flashing beacons are displaced or are not in an upright position, from any cause, during the progress of the work, the Contractor shall immediately repair and repaint or replace the flashing beacons in their original locations.

At the end of each work shift, all portable flashing beacon units shall be removed from the traveled way. Full compensation for placing, removing and storing flashing beacon units daily as the work progresses shall be considered as included in the contract unit price paid for the various items of work and no additional compensation will be allowed therefor.

10.08 Portable Barricades

Type III barricades conforming to the provisions in Section 12-3, "Traffic-Handling Equipment and Devices," of the Standard Specifications shall be furnished, placed, and maintained in sturdy working manner at the locations designated by the Engineer and in accordance with the provisions in Section 7-1.03, "Public Convenience," of the Standard Specifications and these General Conditions.

The barricades shall conform to the details shown on Caltrans Standard Plan A73 and as specified in Section 12-3.02, "Barricades," of the Standard Specifications, except that minor variations in dimensions may be accepted if approved by the Engineer.

Barricades damaged from any cause during the progress of the work shall be replaced or repaired (including painting and reflectorized material) by the Contractor at its expense.

10.09 Temporary Delineation

If permanent or temporary traffic delineation operations are not properly performed by the working day completion time(s) specified, the City may elect to perform such operations; cost for all such City-performed operations will be at the Contractor's expense, with all costs therefor deducted from Contractor's progress payments.

10.10 Procedures and Posting of "No Parking" Signs on City Streets

The City's policy is to post effectively and prior to towing, attempt to contact all those in violation of the properly posted restrictions. Advanced coordination with the Police

Department is required to make sure that the officers have sufficient notice and accurate construction time schedules for this activity. The Contractor is responsible for contacting the Police Department and effecting this notification procedure. Time must also be allowed for towing equipment to be notified and tow any vehicles.

The Police Traffic Sergeant's office hours are 8:00 a.m. to 9:00 a.m. and 2:30 p.m. to 4:00 p.m. The Traffic Sergeant may be reached by phone at 777-4100. If you need to contact the Sergeant immediately - when the sergeant is not in the office, contact Police Dispatch at the above number and ask them to contact the Sergeant. Prior to start of any work under this Contract, Contractor shall arrange a meeting with the Traffic Sergeant to go over the specific job needs.

Requirements for "No Parking" Posting and Any Required Towing Are As Follows:

1) Signs shall have date(s) of the "No Parking" (the actual day[s] of work – for example: 5/24/03 to 5/25/03) and hours (for example: 6:00 a.m. to 4:30 p.m.) indicated.
2) The No Parking areas shall be posted at least forty-eight (48) hours ahead of effective time. If the No Parking area is to take effect on a Monday, then the No Parking Area shall be posted pursuant to this section no later than the preceding Thursday evening. If the No Parking area is to take effect on the day following a holiday, then the No Parking area shall be posted pursuant to this section no later than the evening of the second preceding business day. For example, if the holiday falls on a Monday, the area shall be posed by Thursday evening; if the holiday falls on a Thursday, the area shall be posted by Tuesday evening. At the time of posting, the Contractor shall notify Police Dispatch with the following information: a) name and phone number of the person doing the posting; b) time and date posted; c) times and dates when the No Parking will be in effect; and d) location of the posting by street addresses.
3) Post on all trees and poles between barricades facing in the direction that drivers in traffic can read. Signs shall be mounted such that the words, "No Parking" are at an elevation at least 3 feet and not more than 7 feet above the adjacent flow line. Signs placed on trees shall be attached by string only. Signs placed on existing poles shall be attached by either string or tape only so as not to cause any damage to existing poles.
4) Barricades or temporary poles containing the no parking information shall be placed every twenty-five feet (25') on center or less.
5) Lighted barricades shall be installed on centers of no more than 150' if placed in the street.
6) The Contractor shall promptly reset or replace all damaged or defective signs.
7) Upon completion of work in each area, all signs, mounting materials, stakes, and barricades shall be promptly and completely removed by the Contractor.
8) Contractor shall notify Police Department of the work location and start time on the day before. Also, Contractor shall notify the Police Department at starting time for each street or area of work during the day. In addition, the Contractor shall update time schedule, if any changes, by phone: Call Police Department at (650) 777-4100 and have them notify the Traffic Sergeant and Parking Enforcement Officers.

THE POLICE DEPARTMENT HAS THE AUTHORITY TO REFUSE TOWING IF CONTRACTOR HAS NOT PLACE SIGNAGE APPROPRIATELY IN ACCORDANCE WITH THESE GENERAL CONDITIONS.

*** END OF SECTION ***

SUPPLEMENTARY GENERAL CONDITIONS

The General Conditions and Standard Conditions are hereby amended as follows:

1. Section 2.04 Compliance Statement of the general conditions is amended by adding the following

2. Section 6.02 of the General Conditions is amended by adding the following:

   "The City-furnished materials for this project are:

   - NONE"

3. Section 8.04 of the General Conditions is amended by adding the following:

   "Contractor's failure to achieve substantial completion of the work described in the Contract Documents will cause the City to incur losses of types and in amounts which are impossible to compute and ascertain with certainty. The Contractor shall pay to the City of Burlingame liquidated damages in the amount of $1000 per day for each day and every calendar days' delay in finishing the work in excess of the number of days (40) referred to in these specifications. The amount may be assessed and recovered by the City as against Contractor and its Surety. Such liquidated damages are intended to represent estimated actual damages and are not intended as a penalty, and Contractor shall pay them to the City, without limiting City's any of the City's rights as provided in the Contract Documents."

*** END OF SECTION ***

SECTION 01010

SUMMARY OF WORK AND CONTRACT CONSIDERATIONS

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. Hillside Protection Work:
   i. The City of Burlingame intends to construct a retaining wall, concrete piers, and a new valley gutter to protect the hillside against landslides that have affected the slope behind 2843 and 2839 Arguello Drive, within the Mills Canyon Park in the City of Burlingame, California.
   ii. To access the location of the site a temporary stabilized access road needs to be constructed by the contractor to move heavy equipment and construction materials to the project site.

B. This project will be constructed on the lands of the City of Burlingame. All rules and regulations and permit conditions of these agencies are made part of the Contract Documents and shall be adhered to by the contractor.

C. Refer to Section 01130 - Work Restrictions for project sequencing requirements.

1.02 TYPE OF CONTRACT

A. The Work covered by these Contract Documents shall be provided under a unit price contract using individual bid items.

1.03 CONTRACTOR'S USE OF SITE AND OWNERS CONTINUED OPERATIONS

A. No storage of materials or equipment shall be allowed at the job site without the Engineer’s prior approval. Equipment and materials for each day’s work shall be transported to the job site daily. The Contractor's use of adjacent lands and roads for access to move onto and off of the site and for daily access of workers, material and equipment shall be arranged and scheduled to minimize interference with resident’s daily activities.

B. The Contractor shall be responsible for maintaining safe emergency exiting for the Owner's and Contractor's personnel in all areas affected by the Contractor’s work.

C. If operation of the Owner's existing facility is adversely affected by the Contractor's work, the Owner may suffer a financial loss and may make a claim against the Contractor to recovery its loss.

1.04 DOCUMENTING EXISTING

A. Prior to commencing the Work, tour the site with the Owner and the Engineer. Examine and document the condition of existing equipment, improvements, and landscape planting on or adjacent to the site in writing. This record shall serve as a basis for determination of subsequent damage due to the Contractor's operations and shall be signed by all parties making the tour.

1.05 SHUTDOWN OF EXISTING UTILITIES, SERVICES OR OPERATIONS

A. Obtain the City's approval at least seven (7) calendar days prior to the shutdown of any utility, service or operation of any existing facility. Give required notice and make appropriate arrangements with the City, utility owners and other affected parties prior to shutdown of any utility service. Base bids on shutdown work performed during normal working hours. If premium time work is required, the difference in cost between performing the work during normal working hours and premium time will be covered by a Change Order.

B. Schedule utility service or operations shutdowns for periods of minimum use and at the Owner's convenience. Have all required material, equipment and workers on site prior to beginning any work involving a possible shutdown. Perform work as required to reduce shutdown time to the minimum. In some cases, this may require increased numbers of workers and/or premium time night or weekend work.

1.06 APPLICATION FOR PAYMENT

A. Applications for Payment shall be made monthly and shall be based on the work completed as of the date of Application for Payment. Line items on the Application for Payment shall be the same as those used on the Bid Schedule.

1.07 UNIT PRICE WORK

A. When the Contract Documents include Unit Price Work, the Contract Price shall include an amount equal to the sum of Unit Prices bid for each item times the estimated quantity for that item listed on the Bid Form.

B. The estimated quantities listed on the Bid Form are not guaranteed to be accurate but are intended solely to determine a Contract Price. If actual quantities differ from estimated quantities by more than plus or minus 25% the unit prices may be adjusted by negotiation. The contractor will be held to the unit price utilized during the bidding phase. Payment to the Contractor shall be based on actual quantities for each type of work as determined by the Engineer from certified quantity surveys or measurements submitted by the Contractor.

C. For the purpose of determining quantities for payment, the Contractor shall submit certified surveys by a licensed surveyor or other certified measurements of quantities

to the Engineer with each application for payment. The Engineer will determine the quantities for payment based on data submitted by the Contractor and the Engineer's written determination shall be final unless appealed within 14 days under Article 10 of the General Conditions.

D. Unit Prices shall include all of the Contractor's cost including overhead and profit.

END OF SECTION

SECTION 01040

COORDINATION AND PROJECT REQUIREMENTS

1.01 PROJECT COORDINATION

A. Coordinate scheduling, submittals and work of various Sections of the Specifications and subcontractors to assure efficient and orderly sequence of interdependent construction.

1.02 FIELD ENGINEERING AND LAYOUT

A. Employ an experienced surveying instrument technician to layout all detailed dimensions and elevations from reference points. Use recognized engineering survey methods and documentation techniques.

1.03 PRECONSTRUCTION MEETINGS

A. Prior to beginning the Work, the Contractor and its key personnel and Subcontractors including the Contractor's Superintendent, Project Manager, and Field Engineer shall attend a meeting with the Owner and the Engineer to discuss the following:

1. Name, Authority, and Responsibilities of Parties Involved
2. Project Procedures:
    a. Progress meetings
    b. Correspondence
    c. Notification
    d. Submittal of Product Data, Shop Drawing Samples, and Proposed Equivalents
    e. Requests for Information
    f. Response to Requests for Information
    g. Requests for Quotation
    h. Work Directive Change
    i. Change Orders
    j. Engineer's "Items of Concern List"
3. Temporary Schedule and Contractor's Construction Schedule
4. Temporary Facilities and Control
5. Testing During Construction
6. Contractors Coordination
7. Maintenance of Record Drawings
8. Owner Provided Items or Work and Owner Furnished Contractor Installed items
9. Final Testing, Startup, and Balancing
10. Punch Lists and Project Closeout Procedures
11. Final Deliverables including Record Drawings, Operation and Maintenance

Manuals, and Special Guarantees.

1.04 PROGRESS MEETINGS

A. The Engineer or designee will conduct weekly progress meetings with Contractor and Owner at the job site. The Engineer will prepare, maintain and distribute agenda and dated record of: (1) actions required and taken and (2) decisions needed and made.

The Contractor shall submit to the City a weekly construction schedule. It shall show the following two weeks of construction schedule and project status. If the weekly schedule is revised, the Contractor shall request approval of changes from the Engineer at least twenty-four (24) hours in advance.

B. Agenda:
   1. Review critical items/action list.
   2. Review work progress. Compare actual progress with planned progress shown on Contractors construction schedule. Discuss Corrective action required. Compare actual and projected progress with Contractor's Construction Schedule, propose methods to correct deficiencies.
   3. Review status of Submittals; review delivery dates and date of need for critical items.
   4. Review coordination problems.
   5. Schedule needed testing and critical inspections.
   6. Review critical requirements for each trade or major piece of equipment prior to beginning work or installation.
   7. Discuss Contractor Quality Control.
   8. Discuss open items on Engineers "Items of Concern List."
   9. Discuss impact of proposed changes on progress Schedule.
   10. Other business.

1.05 MATERIAL AND EQUIPMENT

A. General:
   1. Verify that products delivered meet requirements of Contract Documents and the requirements for Favorably Reviewed submittals.

B. Compatibility of Equipment and Material:
   1. Similar items, equipment, devices or products furnished under a single specification section shall all be made by the same maker and have interchangeable parts.
   2. All similar materials or products that are interrelated or used together in an assembly shall be compatible with each other.

C. Transportation and Handling:

1. Transport and handle products in accordance with manufacturer's instructions.
2. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
3. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

D. Storage and Protection:
1. Store and protect products in accordance with manufacturer's instructions. Seals and labels shall be intact and legible.
2. Cover products subject to deterioration from moisture, dust, or sunlight with opaque watertight but breathable sheet covering. Provide ventilation to avoid condensation.
3. Provide offsite storage and protection including insurance coverage when site does not permit onsite storage or protection.
4. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
5. Provide facilities, equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
6. Arrange storage of products to permit access for inspection. Periodically inspect to assure products are undamaged and are maintained under specified conditions.

E. Installation Standards and Manufacturers' Recommendations:
1. Install all products and materials in strict compliance with the most restrictive of the following:
a. The manufacturer's or provider's written instructions or recommendations. Follow step-by-step installation procedures.
b. Recommendations of referenced trade associations or standards.
c. These specifications and drawings.
2. Where conflicts exist present alternatives with advantages and disadvantages to Engineer for decision.

F. If reference standards or manufacturer's instructions contain provisions that would alter or are at variance with relationships between the parties to the Contract set forth in the Contract Documents, the provisions in the Contract Documents shall take precedence.

1.06 SAFETY

A. In accordance with generally accepted construction practice, applicable law and the General Conditions, the Contractor shall be solely and exclusively responsible for:
1. Construction means and methods.
2. Safety of employees engaged in the work while on and off the site.
3. Safety of the Owner, the Engineer, the Design Engineer, and others who may visit or be affected by the work.

4. Safety of the work itself including material and equipment to be incorporated therein.
5. Safety of other property at the site or adjacent thereto.
6. Safety programs, equipment and protective devices required to assure the safety of persons and property for whom/which the Contractor is responsible.

B. The duties of the Engineer in conducting review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's work methods, equipment, bracing, scaffolding or safety measures in, on, or near the construction site.

C. The Contractor is hereby informed that work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instructions as required to prevent injury to personnel and damage to property, and to comply with all applicable laws and regulations including State OSHA, Federal OSHA, and other regulations referenced in these Contract Documents.

D. The Contractor shall, at all times, maintain the job in a condition that is safe for the Owner, the Engineer and their Consultants to make site visits and to conduct construction reviews. If the Owner or the Engineer cannot allow personnel to visit the job because it is not safe, the Contractor is not providing required safe access to the Work as required by General Conditions.

E. The Contractor shall prepare a Safety Plan meeting the requirements of applicable regulations. As a minimum, the Contractors Safety Plan shall set forth definite procedures for informing workers about safety, for instructing workers in safe practices, for assuring that workers are using appropriate safety equipment and safe work practices and for reporting accidents.

1.07 EXCAVATION AND TRENCHING; WORK WITHIN CONFINED SPACES

A. Submit specific plans to the Owner showing details of provisions for worker protection from caving ground in accordance with Section 6705 of the California State Labor Code. The detailed plans shall show the design of shoring, bracing, sloping banks or other provisions and shall be prepared, signed and stamped by a Civil or Structural Engineer licensed in the State in which the Work is performed and retained by the Contractor. The Owner's acceptance of the detailed plans submitted is only an acknowledgment of the submission and does not constitute review or approval of the designs, design assumptions, criteria, completeness, applicability to areas of intended use, or implementation of the plans, which are solely the responsibility of the Contractor and his Registered Engineer.

B. Work Within Confined Spaces: Work within confined spaces is subject to applicable laws, regulations and safety orders including applicable California Tunnel Safety Orders and regulations.

C. The foregoing provisions do NOT reduce the requirement for the Contractor to

maintain safety in ALL operations performed by the Contractor or its Subcontractors.

1.08 CONTRACTOR'S QUALITY CONTROL

A. The Contractor shall be fully responsible for inspecting the work of its suppliers and Subcontractors to assure that the work when completed will comply with the standards for materials and workmanship required by the Contract Documents.

B. Inspections, periodic observations and testing performed by the Owner or the Engineer are for the Owner's benefit and information only and shall not be construed as partial or incremental acceptance of the work and shall not be deemed to establish any duty on the part of the Owner or the Engineer to the Contractor, its subcontractors or suppliers.

C. The Contractor shall:
   1. Monitor quality control over suppliers, manufacturer, products, services, site conditions, and workmanship, to produce work of specified quality.
   2. Comply fully with manufacturer's installation instructions, including performing each step in sequence as recommended by the manufacturer.
   3. Submit a Request for Information to Engineer before proceeding with work when manufacturers' instructions or reference standards conflict with Contract Documents.
   4. Comply with specified standards as a minimum quality for the work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
   5. Perform work by persons specializing in the specific trade and class of work required and qualified to produce workmanship of specified quality.

D. If reference standards or manufacturers' instructions contain provisions that would alter or are at variance with relationships between the parties to the Contract set forth in the Contract Documents, the provisions in the Contract Documents shall take precedence.

E. The Contractor shall provide assistance required by the Engineer to adequately inspect the Work including ladders, scaffolding, lighting, ventilation and other aids to facilitate access and provide a safe working environment.

1.09 TESTING LABORATORY SERVICES AND CERTIFIED LABORATORY REPORTS

A. Provide testing service in accordance with General Conditions and specific requirements contained in each technical specification section. Submit Certified Laboratory Reports required by technical specification sections.

END OF SECTION

SECTION 01130

WORK RESTRICTIONS

1.01 - **PURPOSE**

Requirements for sequencing, scheduling, and coordinating construction so that the Contractor's Work is integrated with the resident's needs, including work restrictions and coordination between construction operations and residents.

1.02 - **GENERAL CONSTRAINTS**

A. Work Sequence and Constraints
   1. Contractor shall complete the construction of the temporary stabilized access road first to move the heavy machinery, equipment and materials that are needed to dig and construct concrete piers that are needed for the concrete retaining wall. The new compacted fill has to be added behind the wall prior to installation of new valley gutter. After all the construction is done the contractor shall regrade the access road back to its original slope and contours add new hydroseed to mitigate erosion in the future. Hydroseeding should occur in fall for germination.
   2. Utilize description of critical work sequence described in this Section as a guideline for scheduling and undertaking the work.
   3. Work sequence and constraints presented do not include all items affecting completion of the work, but are intended to describe critical events necessary to minimize disruption of the existing facilities and to ensure compliance with the water quality permit requirements.

B. Hours of Construction Work:
   1. Normal working hours will be allowed as defined in the General Conditions and the Supplementary General Conditions.
   2. The Contractor shall notify the Engineer at least 3 working days prior to any work proposed for outside normal working hours defined above.

C. Contractor's onsite parking for employee vehicles shall not block residential area access or use.

D. The Contractor shall not allow the discharge of any non-stormwater to the storm drain system.

1.03 - **OPERATIONAL AND SCHEDULE CONSTRAINTS AND REQUIREMENTS, GENERAL REQUIREMENTS**

A. The following shall be in operation or available at all times, including during shutdowns, with the exception of necessary outages up to 2 hours:
   1. Telecommunication systems;
   2. Electricity to the residences. Portable generators shall be provided to meet this requirement as necessary.
   3. Access for City and delivery vehicles to all residences.

B. The Contractor shall employ labor and equipment on a 24-hour, 7-days a week basis at no additional cost to the City to correct all other unplanned operational disruptions caused by the work under this Agreement.

C. The Contractor shall informally meet with the Engineer at the end of the working day to inform Engineer of construction status and known impact on residents.

1.04 - **UTILITIES**

A. Contractor shall furnish advance notice to and utilize services of Underground Services Alert ("U.S.A.") for location and marking of all underground utilities.
B. Contractor shall protect the site's electrical, gas, telephone, water, sanitary, control, and other utilities and structures.

1.05 - **SHUTDOWN CONSTRAINTS**

If the work will require utility services to be shut down to complete portions of the work described in the Contract Documents. Provide a written notification 5 working days and 48 hours in advance to the Engineer and affected residents prior to any planned shutdown.

1.06 - **TEMPORARY SERVICES, MATERIALS AND EQUIPMENT**

A. Locate temporary facilities in a manner that minimizes interferences to the public's access to the existing public roadways and residences.
B. Dimensions for all existing structures, paving, and other nonstructural items are approximate. The Contractor shall field verify all dimensions and conditions and report any discrepancies to the Engineer a minimum of 10 working days in advance of any construction in the area.

END OF SECTION

SECTION 01140

ENVIRONMENTAL PROTECTION

1.01 SCOPE

A. During the progress of the work, keep the work areas occupied by the Contractor in a neat and clean condition and protect the environment both onsite and offsite, throughout and upon completion of the construction project.

B. These requirements are intended to be consistent with the Bay Area Air Quality Management District standard mitigation requirements, Federal Clean Water Act, the Porter-Cologne Water Quality Control Act, and the San Mateo County Storm Water Prevention Program. Notwithstanding any other provision of this Agreement, Contractor shall also comply with the General Construction Activity Permit.

1.02 SUBMITTALS

A. Develop an Environmental Protection Plan in detail and submit to the Engineer within ten (10) days from the date of the Notice to Proceed. Distribute the plan to all employees and to all subcontractors and their employees. The Environmental Protection Plan shall include, but not be limited to, the following items:

1. Copies of required permits.
2. Proposed sanitary landfill site.
3. Other proposed disposal sites.
4. Copies of any agreements with public or private landowners regarding equipment, materials storage, borrow sites; fill sites, or disposal sites. Any such agreement made by the Contractor shall be invalid if its execution causes violation of local or regional grading or land use regulations.
5. Storm Water Pollution Prevention Plan (SWPPP)
6. Erosion & Sediment Control Plan
7. Haul Route Plans

1.03 MITIGATION OF CONSTRUCTION IMPACTS

A. Requirements: All operations shall comply with all federal, state and local regulations pertaining to water, air, solid waste and noise pollution.

B. Definitions of Contaminants:

1. Sediment: Soil and other debris that have been eroded and transported by runoff water.

2. Solid Waste: Rubbish, debris, garbage and other discarded solid materials resulting from construction activities, including a variety of combustible and non-

combustible wastes, such as ashes, waste materials that result from construction or maintenance and repair work, leaves and tree trimmings.

3. Chemical Waste: Includes petroleum products, bituminous materials, salts, acids, alkalis, herbicides, pesticides, disinfectants, organic chemicals and inorganic wastes. Some of the above may be classified as "hazardous."

4. Sanitary Wastes:

   a. Sewage: That which is considered as domestic sanitary sewage.

   b. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing and consumption of food.

5. Hazardous Materials: As defined by applicable laws and regulations. Undisclosed hazardous material contamination, if encountered will constitute a changed site condition. The Owner may retain a separate contractor to dispose of undisclosed hazardous material encountered.

C. Protection of Natural Resources:

1. General: It is intended that the natural resources within the project boundaries and outside the limits of permanent work performed under this Contract be preserved in their existing condition or be restored to an equivalent or improved condition upon completion of the work. Confine construction activities to areas defined by the property boundaries, easements, and work area limits shown on the Drawings. Return construction areas to their pre-construction elevations except where surface elevations are otherwise noted to be changed. Maintain natural drainage patterns. Conduct construction activities to avoid ponding stagnant water conducive to mosquito breeding.

2. Land Resources: Do not trim, prune, remove, cut, deface, injure or destroy trees or shrubs outside the work area limits. Do not trim, prune, remove, deface, injure or destroy trees within the work area without permission from the Engineer.

   a. Protection: Protect trees that are located near the limits of the Contractor's work areas which may possibly be defaced, bruised or injured or otherwise damaged by the Contractor's operations. No ropes, cables or guys shall be fastened to or attached to any existing nearby trees or shrubs for anchorages unless specifically authorized. Where such special emergency use is permitted, the Contractor shall be responsible for any damage resulting from such use.

   b. Trimming: In the event the Engineer grants permission to do so, trim tree limbs overhanging the line of the work and in danger of being damaged by the Contractor's operations in accordance with recognized standards for such work. Remove other tree limbs under the direction of the City Arborist, so that the tree will present a balanced appearance.

   c. Treatment of Roots: Do not cut roots unnecessarily during excavating or trenching operations. Expose major roots (larger than 2-inches in diameter) encountered in the course of excavation and do not sever. Wrap them in burlap

as a protective measure while exposed and request City Arborist direction regarding their continued protection or removal. In the event the City Arborist grants permission to remove, neatly trim major roots at the edge of the excavation or trench.

d. Repair or Restoration: Repair or replace as specified below any trees or other landscape features scarred or damaged by equipment or construction operations. The repair and/or restoration plan shall be favorably reviewed prior to its initiation.

e. Temporary Construction: Obliterate all signs of temporary construction facilities such as haul roads, work areas, structures, foundations of temporary structures, stockpiles of excess or waste materials, or any other vestiges of construction as directed by the Engineer. Level all temporary roads, parking areas and any other areas that have become compacted or shaped. Any unpaved areas where vehicles are operated shall receive a suitable surface treatment or shall be periodically wetted down to prevent construction operations from producing dust damage and nuisance to persons and property, at no additional cost to the Owner. Keep haul roads clear at all times of any object that creates an unsafe condition. Promptly remove any contaminants or construction material dropped from construction vehicles. Do not drop mud and debris from construction equipment on public streets. Sweep clean turning areas and pavement entrances as necessary.

3. Fish and Wildlife Resources: Perform all work and take such steps required to prevent any interference or disturbance to fish and wildlife. The Contractor will not be permitted to alter water flows or otherwise significantly disturb native habitat adjacent to the project area which are critical to fish and wildlife except as may be indicated or specified.

4. Cultural Resources: The project does not pass through any known archaeological sites. However, it is conceivable that unrecorded archaeological sites could be discovered during the construction. In the event that artifacts, human remains, or other cultural resources are discovered during excavations at locations of the Work, the Contractor shall protect the discovered items, notify the Engineer, and comply with applicable law.

5. Dust Control, Air Pollution and Odor Control: Shall conform to Section 14-9 “Air Quality” of the Standard Specifications. Employ measures to prevent the creation of dust, air pollution and odors.

   a. Unpaved areas where vehicles are operated shall be periodically wetted down or given an equivalent form of treatment, to eliminate dust formation.

   b. Active construction areas will be watered at least twice daily.
   c. All trucks hauling loose material (sand, dirt, etc.) will have their load covered. Maintain two (2) feet of freeboard within truck.

   d. Store all volatile liquids, including fuels or solvents in closed containers.

   e. No open burning of debris, lumber or other scrap will be permitted.

f. Properly maintain equipment to reduce gaseous pollutant emissions.

g. Use of reclaimed water for dust control requires a Regional Water Quality Control Board permit.

6. Street Sweeping: Contractor shall clean and sweep roadways as necessary to ensure that vehicle and pedestrian travel is not endangered by the presence of loose materials. Construction site entrances shall be kept free of these materials.

7. Construction Storage Areas: Storage of construction equipment and materials shall be limited to the Contractor's storage area. No storage area will be provided by the City. The Contractor shall secure its own storage area for materials and equipment needed outside of the limits of construction.

   a. Store and service equipment at the designated Contractor's storage area where oil wastes shall be collected in containers. Oil wastes shall not be allowed to flow onto the ground or into surface waters. Containers shall be required at the construction site for the disposal of materials such as paint, paint thinner, solvents, motor oil, fuels, resins and other environmentally deleterious substances. No dumping of surplus concrete or grout on the site will be permitted.

8. Sanitation: During the construction period, provide adequate and conveniently located chemical sanitation facilities, properly screened, for use of construction crews, the Engineer and visitors to the site. Facilities shall be regularly maintained.

9. Fire Prevention: Take steps to prevent fires including, but not limited to the following:

   a. Provide spark arrestors on all internal combustion engines.

   b. Store and handle flammable liquids in accordance with the Flammable and Combustible Liquids Code, NFPA 30.

   c. Provide fire extinguishers at hazardous locations or operations, such as welding.

10. Erosion and Sediment Transport Control:

    a. The Contractor shall maximize the control of erosion and sediment by using the BMP's for erosion and sedimentation in the *California Storm Water Best Management Practice Handbook-Construction Activity* (published by the Storm Water Quality Task Force) or *Manual of Standards for Erosion & Sediment Control Measures* (published by the Association of Bay Area Governments (ABAG)).

    b. Discharge construction runoff into small drainages at frequent intervals to avoid buildup of large potentially erosive flows.

    c. Prevent runoff from flowing over unprotected slopes.

    d. Keep disturbed areas to the minimum necessary for construction.

e. Keep runoff away from disturbed areas during construction.

f. Direct flows over vegetated areas prior to discharge into public storm drainage systems.

g. Trap sediment before it leaves the site, using such techniques as check dams, sediment ponds, or siltation fences.

h. Remove and dispose of all project construction-generated siltation that occurs in offsite retention ponds.

i. Confine construction to the dry season, whenever possible. If construction needs to be scheduled for the wet season, ensure that erosion and sediment transport control measures are ready for implementation prior to the onset of the first major storm of the season.

j. Stabilize disturbed areas as quickly as possible.

k. The contractor shall prepare a Storm Water Pollution Prevention Plan in conformance with the requirements of the State Water Resources Control Board (SWRCB). The contractor shall file the required Notice of Intent (NOI) with the SWRCB.

11. Spill Prevention and Control:

a. The Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents appropriate for the materials and equipment being used, readily accessible on-site. Other spill clean-up materials may include storm drain cover mats, portable dikes, and portable pumps.

b. The Contractor shall immediately contain and prevent leaks and spills from entering storm drains, and properly clean up and dispose of the waste and cleanup materials. If the waste is hazardous, the Contractor shall handle the waste as described in Section 1.04C of this Technical specification.

c. The Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall not bury spilled hazardous materials.

d. The Contractor shall immediately report any hazardous materials spill or release to the City of Burlingame Fire Department at 9-1-1 or (650) 672-0313.

12. Vehicle / Equipment Inspection and Cleaning:

a. The Contractor shall not perform vehicle or equipment cleaning on-site or in any public right-of-way or on any public property using soaps, solvents, degreasers, steam cleaning equipment, or equivalent methods.

b. The Contractor shall perform vehicle or equipment cleaning, with water only, in a designated, bermed area that will not allow rinse water to run off-site or into streets, gutters, storm drains, or creeks.

c. The Contractor shall inspect all vehicles and equipment arriving on-site.

13. Vehicle / Equipment Maintenance and Fueling:

    a. The Contractor shall perform maintenance and fueling of vehicles or equipment in a designated, bermed area or over a drip pan that will not allow run-on of storm water or runoff of spills.

    b. The Contractor shall use secondary containment, such as a drain pan, to catch leaks or spills any time that vehicle or equipment fluids are dispensed, changed, or poured.

    c. The Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.

    d. The Contractor shall clean up leaks and spills of vehicle or equipment fluids immediately and dispose of the waste and cleanup materials as hazardous waste, as described in Section 1.04C.

    e. The Contractor shall not wash any spilled material into streets, gutters, storm drains, or creeks and shall report material spills into streets, gutters, storm drains, or creeks to the Engineer immediately.

    f. The Contractor shall not bury spilled hazardous materials and shall report any hazardous materials spill to City of Burlingame Fire Department immediately.

    g. Drain pans shall be used to catch leaks or leaks are cleaned up immediately, and the waste and cleanup and the waste and cleanup materials shall be disposed of as hazardous waste.

    h. The Contractor shall recycle waste oil and antifreeze to the maximum extent practicable.

    i. The Contractor shall comply with Federal, State, County and City requirements for aboveground storage tanks.

14. Contaminated Soil Management:

    a. On all projects involving grading or excavation, the Contractor shall look for contaminated soil as evidenced by site history, discoloration, odor, differences in soil properties, abandoned underground tanks or pipes, or buried debris. If the project is not within an area of known soil contamination and no evidence of soil contamination is found, then testing of the soil shall only be required if directed by the Engineer. The Contractor shall follow subsection (b) below if contamination is found.

    b. If the project is within an area of known soil contamination or evidence of soil contamination is found, then soil from grading or excavation operations shall be tested. The soil shall be managed as required by the Burlingame Fire Department, San Mateo County Department of Health Services or other designated agency.

c. If the project is found to be within an area of soil contamination not identified by the City in the project specifications, a change order shall be negotiated to cover additional work performed by the Contractor.

15. Concrete, Grout, and Mortar Waste Management:

a. Material Management:

The Contractor shall store concrete, grout, and mortar away from drainage areas and ensure that these materials do not enter the storm drain system.

b. Concrete Truck/Equipment Wash Out:

1. The Contractor shall not wash out concrete trucks or equipment into streets, gutters, storm drains, or creeks.

2. The Contractor shall perform washout of concrete trucks or equipment off-site or in a designated area on-site where the water will flow onto dirt or into a temporary pit in a dirt area.

3. The Contractor shall let the water percolate into the soil and recycle the hardened concrete. If a suitable dirt area is not available, then the Contractor shall collect the wash water and concrete material and remove it off-site.

1.04 STORAGE AND DISPOSAL OPERATIONS

A. Recycling

1. It is the City's policy that all discarded or removed materials, if possible, are to be sorted and recycled, including base material, asphalt concrete, and form work. The San Mateo County Waste Management Program (650-599-1412) can provide specific information regarding the availability and costs involved in recycling materials.

2. At the pre-construction conference, Contractor shall provide the City with a plan for ensuring that materials, such as base material, asphalt concrete, and form work, that are being removed from the project during construction will be recycled. The City may require written proof that the Contractor has recycled the discarded and removed materials from the project, and the Contractor shall provide that proof within forty-eight (48) hours of the request with a written explanation why any materials that were not recycled could not be recycled.

B. Solid Waste Management:

1. Supply solid waste transfer containers. Each day remove all debris such as spent air filters, oil cartridges, cans, bottles, combustibles and litter. Take care to prevent trash and papers from blowing onto adjacent property. Encourage personnel to use refuse containers. Convey contents to a sanitary landfill.

2. Washing of concrete containers where wastewater may reach adjacent property or natural water courses will not be permitted. Remove any excess concrete to the sanitary landfill.

C. Chemical Waste and Hazardous Materials Management: Furnish containers for storage of spent chemicals used during construction operations. Dispose of chemicals and hazardous materials in accordance with applicable regulations. Any Asbestos Cement Pipe (ACP) that is disturbed shall be removed and disposed of offsite as hazardous waste in accordance with all applicable current regulations.

D. Storage:

1. The Contractor shall label and store all hazardous materials such as pesticides, paints, thinners, solvents, and fuels; and all hazardous wastes, such as waste oil and antifreeze; in accordance with all applicable County, State and Federal regulations.

2. The Contractor shall store all hazardous materials and all hazardous wastes in accordance with secondary containment regulations, and these materials and wastes shall be covered to avoid having to handle collected rain water.

3. The Contractor shall keep an accurate, up-to-date inventory, including Material Safety Data Sheets (MSDS's), of hazardous wastes stored on-site, to assist emergency response personnel in the event of a hazardous materials incident. The inventory shall include a site map showing the location of these materials.

4. The Contractor shall arrange for regular hazardous waste collection to comply with time limits on storage of hazardous wastes.

5. The Contractor shall dispose of hazardous waste only at authorized and permitted Treatment, Storage, and Disposal Facilities, and use only licensed hazardous waste haulers to remove the waste off-site, unless quantities to be transported are below applicable threshold limits for transportation specified in State and Federal regulations.

E. Garbage: Store garbage in covered containers, pick up daily and dispose of in a sanitary landfill.

F. Dispose of vegetation, weeds, rubble, and other materials removed by the clearing, stripping and grubbing operations off site at a suitable disposal site in accordance with applicable regulations.

G. Excavated Materials:

1. Native soil complying with the requirements of Section 02315, Excavation and Fill, may be used for backfill as allowed by that section.

2. Spoil Material:

a. Remove all material which is excavated in excess of that required for backfill, and such excavated material which is unsuitable for backfill, from the site and dispose of offsite in accordance with applicable regulations at the disposal site indicated in the Environmental Protection Plan. No additional compensation will be paid to the Contractor for such disposal. Include all such costs in the lump sum prices bid for the project.

b. Rubbish shall consist of all materials not classified as suitable materials or rubble and shall include shrubbery, trees, timber, trash and garbage.

END OF SECTION

SECTION 01300

SUBMITTALS

1.01 SUBMITTAL PROCEDURES

A. Accompany each submittal with a Submittal form which contains the following information:

1. Contractor's name and the name of Subcontractor or supplier who prepared the submittal.
2. The project name and identifying number.
3. Description of the submittal and reference to the Contract requirement or technical specification section and paragraph number being addressed.

B. Submit the number and type of copies for each submittal and follow the procedures described below or in other paragraphs in this Section. Submit one digital copy and one hard copy of submittals not covered in this Section 01300.

1. Designation of Superintendent: Submit one digital copy and one hard copy for information. Include name, address, home telephone number and a brief resume.
2. List of Subcontractors and Major Suppliers: Submit one digital copy and one hard copy for information. Include address, telephone number and name of responsible party.
3. Subcontractors'/Suppliers'/Manufacturers' Affidavits. Submit one digital copy and one hard copy for items specified in the Technical Specifications.
4. Environmental Protection Plan. Submit one digital copy and one hard copy for information.
5. All submitted copies shall be clear, sharp, of high contrast and legible.
6. Digital copies of submittals shall be in a file format acceptable to the Engineer Acceptable file format include MS Office Suite, Auto CAD, or Adobe formats. Any digital submittals submitted in an unacceptable format shall be reformatted and resubmitted by the Contractor.

1.02 SCHEDULE OF SUBMITTALS

A. Submit one digital copy and one hard copy for information. No copy will be returned.

B. Within 10 days after the Notice to Proceed, submit a Schedule of Submittals showing the date by which each submittal required for Product Review or Product Information will be made. Identify the items that will be included in each submittal (see

paragraph 1.05 of this Section) by listing the item or group of items and the Specification Section and paragraph number under which they are specified. Indicate whether the submittal is required for Product Review of Proposed Equivalents, Shop Drawings, Product Data or Samples or required for Product Information only.

C. The Contractor shall allow 5 days for the Engineer's review of each submittal and 5 days for each resubmittal unless a different period is specified by the Engineer in writing. If the Engineer requests additional information or clarification of a submittal, the 5 days shall be measured from the date the additional information or clarification is received. If the Contractor requires more than two submittals to obtain the Engineer's Favorable Review, the Contractor shall compensate the Owner for the cost of the Engineer's additional review time. The Contractor shall not perform work for which reviewed submittals are required without obtaining Favorable Review of submittals.

1.03 CONSTRUCTION SCHEDULE

A. Submit one digital copy for information.

B. If the Construction Schedule does not reflect the format requirements, the specified work, or the Contract Time, it will be returned to the Contractor for modification.

C. Accelerated Work if Required to Meet Schedule: Give Engineer 3 days prior notice of construction that will take place outside of normal work hours or work days. Compensate Owner for extra inspection cost caused by Accelerated Work required to meet Schedule. Note: Work planned outside of approved working hours requires Engineer's or designee approval.

D. Give Engineer 3 days prior notice of normal work days on which construction will not take place or of scheduled construction that will not take place. Compensate Owner for extra inspection cost resulting from failure to give notice.

1.04 SHOP DRAWING, PRODUCT DATA AND SAMPLES SUBMITTED FOR PRODUCT REVIEW

A. This paragraph covers submittal of Shop Drawings, Product Data and Samples required for the Engineer's review referred to as Product Review submittals in the Technical Specifications (Division 2 through 11). Submittals required for information only are referred to as Product Information submittals in the Technical Specifications and are covered in paragraph 1.07 of this Section.

1. "Shop Drawings" are drawings, diagrams, schedules and other data custom prepared by the Contractor or on of its subcontractors or suppliers to illustrate some portion of the Work

2. "Product Data" are catalogue pages, brochures, schedules, performance charts, diagrams, instructions and other information which have been highlighted or marked and certified (If required in the Technical Specifications) by the Contractor

to indicate the specific items, including options, that are being submitted for some portion of the work.

B. Number and type of submittals:

1. Shop Drawings: Submit one digital copy and one hard copy plus additional hard copies if required by the Contractor. Hard copies in excess of one will be marked, stamped and returned to the Contractor.

2. Product Data: Submit one digital copy and one hard copy. Hard copies in excess of one will be marked, stamped and returned to the Contractor.

3. Samples: Submit three labeled samples or three sets of samples of manufacturer's full range of colors and finishes. Comply with requirements in Technical Specification Sections. One sample will be returned to Contractor.

C. The Contractor shall make all Product Review submittals early enough to allow adequate time for the Engineer's review, for manufacture and for delivery at the construction site without causing delay to the Work. Submittals shall be made early enough to allow for unforeseen delays such as:

1. Failure to obtain Favorable Review because of inadequate or incomplete submittal or because the item submitted does not meet the requirements of the Contract Documents.

2. Delays in manufacture.

3. Delays in delivery.

D. Content of Submittals:

1. Each submittal shall include all of the items and material required for a complete assembly, system or Specification Section.

2. Submittals shall contain all of the physical, technical and performance data required by the specifications or necessary to demonstrate conclusively that the items comply with the requirements of the Contract Documents.

3. Include information on characteristics of electrical or utility service required and verification that requirements have been coordinated with services provided by the Work and by other interconnected elements of the Work.

4. Provide verification that the physical characteristics of items submitted, including size, configuration, clearances, mounting points, utility connection points and service access points, are suitable for the space provided and are compatible with other interrelated items that are existing or have or will be submitted.

5. Label each Product Data Submittal, Shop Drawing and Sample with the information required in paragraph 1.01A of this Section. Highlight or mark every page of every copy of all Product Data submittals to show the specific items being submitted and all options included or choices offered.

6. Additional requirements for Product Review submittals are contained in the Technical Specification sections.

7. Designation of work as "NIC" or "by others," shown on Shop Drawings, shall mean that the work will be the responsibility of the Contractor rather than the subcontractor or supplier who has prepared the Shop Drawings.

E. Compatibility of Equipment and Material:

1. Verify that items proposed for use meet the requirements in the paragraph titled "Material and Equipment" in Section 01040 especially the subparagraphs titled "Compatibility of Material and Equipment."

F. Requirements for Contractor Designed Items and for First Specified (Named) Items.

1. Verify that items meet the requirements in the paragraph titled "Performance Specifications and Contractor Designed Work" in Section 01040.

G. Submittals that contain deviations from the requirements of the Contract Documents shall be accompanied by a separate letter explaining the deviations. The Contractor's letter shall:

1. Cite the specific Contract requirement including the Specification Section and paragraph number for which approval of a deviation is sought.

2. Describe the proposed alternate material, item or construction and explain its advantages and/or disadvantages to the Owner.

3. State the reduction in Contract Price if any that is offered to the Owner.

H. Engineer's Review Procedure and Meaning

1. The Engineer will stamp and mark each Product Review submittal prior to returning it to the Contractor. The stamp will indicate whether or not the review was favorable and what action is required of the Contractor. Review categories "No Exceptions Taken" and "Make Corrections Noted" both indicate Favorable Review.

2. Favorable Review is Contingent on:

a. The compatibility of items included in a submittal with other related or interdependent items included in previous or future submittals.

b. Future submittal of items related to or required to be part of this submittal that was not included with this submittal.

3. Favorable Review of a submittal does not constitute approval or deletion of items required as part of the submittal but not included with the submittal. Favorable

Review of items included in the submittal does not constitute deletion of specified features, options or accessories that were not included in the submittal.

4. The action required by the Contractor for each category of review is as follows:
   a. **NO EXCEPTIONS TAKEN**. NO RESUBMITTAL REQUIRED.
   b. **MAKE CORRECTIONS NOTED**:
      1. NO RESUBMITTAL REQUIRED. The Contractor shall make corrections noted prior to manufacture.
      2. PARTIAL RESUBMITTALS REQUIRED. The Contractor shall submit related accessory or optional items as noted which are required but were not included with the submittal and/or shall resubmit unsatisfactory portions or attributes of items as noted. The Contractor may proceed to manufacture those portions of the submittal that will be unaffected by required resubmittals.
   c. **AMEND AND RESUBMIT**. The Contractor shall amend and resubmit the submittal as noted or required to comply with the Contract Documents.
   d. **REJECTED - RESUBMIT**. The item submitted does not comply with the Contract Documents in a major way. Resubmit items that comply with the requirements of the Contract Documents.
   e. **NOT REVIEWED**. The item was submitted as required by the contract documents, but was not reviewed by the Engineer or City.
5. The letter of transmittal accompanying the returned Product Review submittal may contain numbered notes. Marking a corresponding number on a Shop Drawing or Product Data submittal shall have the same effect as applying the entire note to the submittal.

I. Re-submittals that contain changes that were not requested by the Engineer on the previous submittal shall be accompanied by a letter explaining the change.

J. Favorable Review Required Prior to Proceeding.

1. Do not proceed with manufacture, fabrication, delivery or installation of items prior to obtaining the Engineers Favorable Review of Product Review submittals.

1.05 PROPOSED EQUIVALENTS

A. When the first specified item is followed by a second maker's name and "or equal," the Contractor may submit Proposed Equivalent items for the Engineer's review. Proposed Equivalent items that are in the Engineer's judgment equal to the first specified item in quality, utility, and appearance, will be Favorably Reviewed. Where a product description and first maker's name is followed by "or equal" with no second maker's name, it means the specifier knows of no equivalent product and the Contractor may submit Proposed Equivalent products by other makers for review.

Where the term “or equal” is omitted, it means that the named item is required to meet the Owner’s needs; no products or makers other than those specified will be considered.

B. Time of Submittal:

1. Submittal of Proposed Equivalents shall be within 35 days of the Notice to Proceed. The Engineer may agree to a later submittal date if requested in writing within 35 days of the Notice to Proceed. The request shall identify the item, give the Specification reference, and proposed manufacturer and model number of the item that will be submitted and the proposed submittal date.

2. The Engineer's agreement to a later submittal date shall be in writing and shall not be construed as Favorable Review or acceptance of the manufacturer or item proposed.

C. Content of submittals shall be the same as that required for Product Data, Shop Drawings and Samples submitted for Product Review in another paragraph of this Section. In addition, the Contractor shall provide information on several recent similar installations of the item to verify its suitability. The information shall include the project name and location, the Owner's name, address, telephone number and name of a knowledgeable person to contact for information on performance of the product.

D. When the Contractor has listed specific maker's products with its Bid, no changes will be permitted without submittal of acceptable evidence justifying the change and the Engineer's written approval.

E. If a non-equivalent substitute is submitted for review, it shall be accompanied by a proposed reduction in Contract Price which shall include the increased cost of Engineering service required to evaluate the proposed substitute (which shall be paid to the Owner whether or not the substitute is accepted) plus the greater of 1) the difference in price between the first specified item and the item submitted and 2) the difference in value to the Owner between the two items.

1.06 PRODUCT INFORMATION SUBMITTALS

A. Submit one digital copy and one hard copy. No copies will be returned.

B. Product Information submittals are required for the Owner's permanent records and will be used for future maintenance, repair, modification or replacement work. Product Information submittals will be examined only to verify that the required submittals have been made; they will NOT be reviewed for compliance with the Contract Documents.

C. Make Product Information submittals prior to delivering material, products or items for which Product Information submittals are required.

D. The Contractor has the sole and exclusive responsibility for furnishing products and work that meets the requirements of the Contract Documents.

E. The Engineer reserves the right to comment on any submittal and to reject any product or work delivered, installed or otherwise at any time that the Engineer become aware that it is defective or does not meet the requirements of the Contract Document.

1.07 OPERATION AND MAINTENANCE MANUALS AND PARTS LISTS

A. RESERVED

1.08 MANUFACTURER'S CERTIFICATES

A. Submit one digital copy.

B. When specified in Technical Specification section, submit manufacturers' certificate to Engineer for review. Indicate whether or not material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate. Certificates may be recent or previous test results on material or Product, but must be acceptable to the Engineer.

END OF SECTION

SECTION 01400

MOBILIZATION, SITE PREPARATION, SITE MAINTENANCE, DEMOBILIZATION

GENERAL

1.01 - SCOPE

Mobilization, site preparation, site maintenance, and demobilization consist of providing temporary facilities and utilities, establishing the work zones, clearing the Site, establishing health and safety procedures, maintaining the Site, providing Site security, and performing final Site grading, cleanup, and demobilization until the proper completion of the work, as required or specified.

1.02 - FIELD ENGINEERING AND LAYOUT

Employ an experienced surveying instrument technician to lay out all detailed dimensions and elevations from reference points. Use recognized engineering survey methods and documentation techniques.

1.03 - SANITARY REGULATIONS

A. The Contractor will provide its own adequate sanitary facilities for the use of those employed on the Work. Such facilities will be made available when the first employees arrive on the site of the Work, will be properly secluded from public observation, will be constructed and maintained during the progress of the Work in suitable numbers and at such points and in such manner as may be required.

B. The Contractor will maintain the sanitary facilities in a satisfactory and sanitary condition at all times and will enforce their use. Sanitation facilities will be serviced at least twice per week. The Contractor will rigorously prohibit the committing of nuisance on the Site of the Work, within the public right-of-way, or on adjacent property.

1.04 - WATER SUPPLY

A. Water provided through a City meter pursuant to this section that is necessary for the performance of the Work under this Agreement will be at no cost to the Contractor.

1.05 - ELECTRICAL ENERGY

A. If the Contractor desires a temporary electric service instead of utilizing temporary generator, the Contractor will make all necessary applications and arrangements and pay all fees and charges for electrical energy for power and light necessary for

the proper completion of the Work and during its entire progress. The Contractor will provide and pay for all temporary wiring, switches, connections, and meters.

B. The Contractor will provide sufficient electric lighting so that all work may be done in a workmanlike manner when there is not sufficient daylight.

1.06 - PRECAUTIONS DURING ADVERSE WEATHER

During adverse weather and against the possibility thereof, the Contractor will take all necessary precautions so that the Work may be done satisfactorily in all respects. When required, protection will be provided by use of tarpaulins or other suitable means.

1.07 - CONTRACTOR'S FIELD OFFICE

The Contractor will not be allowed to have a temporary field office at the project site and the contractor shall make the necessary arrangements to have readily accessible copies of all contract documents at the site including Contractor's set of as-built drawings.

1.08 - OWNER'S REPRESENTATION OF EXISTING CONDITIONS

Owner, Owner's Representative, and Design Engineer make no representation and assume no responsibility with respect to the ultimate type, nature, or quantity of soil encountered. Contractor will include, as appropriate, contingencies to cover uncertainties. See also Section 02315 Excavation and Fill.

1.09 - PERMITS

1. Contractor and subcontractors will obtain and pay for all required licenses and permits, including permits from the City of Burlingame, and submit all required notifications. See Section 5 of the General Conditions. Permits from or notifications to the County of San Mateo, Bay Area Air Quality Management District, CAL/OSHA, and the Bay Area Regional Water Quality Control Board may be required, including associated fees. Contractor will identify all permits and notifications including fees required for either Work and provide a summary table to the Owner's Representative for review 15 days after the Notice to Proceed.

1.10 - COORDINATION WITH THE CITY OF BURLINGAME AND SAN MATEO COUNTY

Contractor will provide Owner and Owner's Representative with 5 working days' notice prior to off hauling, delivery of all materials, or other activities that will generate a high volume of traffic.

1.11 - SECURITY

A. The Contractor will provide any temporary fencing that it deems necessary for Site security. Contractor will promptly repair, maintain, or provide new fencing as needed to maintain Site security. In no case will the degree of Site security be reduced by the Contractor's Work or failure to act.

B. Contractor will provide security and facilities to protect the Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

1.12 - SAFETY

A. Contractor will provide temporary guardrails, ladders, stairs, guards, and barricades to protect persons in accordance with applicable regulations, including California Code of Regulation Title 8 and Cal/OSHA.

B. Contractor will prepare and submit a site-specific Health and Safety Plan to Owner's Representative within 10 working days of Notice to Proceed. Contractor will prepare the site-specific Health and Safety Plan in accordance with Laws and Regulations, including but not limited to CAL-OSHA CCR Title 8, Sections 5192 and 5214; 29 CFR Section 1910.120 et seq.; and Proposition 65.

C. The Contractor's Health and Safety Plan will be prepared by the Contractor's responsible health and safety manager or Contractor's retained Certified Industrial Hygienist. At a minimum, the Contractor's Health and Safety Plan shall set forth definite procedures for informing workers about safety, for instructing workers in safe practices, for assuring that workers are using appropriate safety equipment and safe work practices and for reporting accidents. Contractor's Health and Safety Plan will include a specific plan for hazard communication and notification to Site workers and visitors.

D. In accordance with generally accepted construction practice, applicable law and the General Conditions, the Contractor shall be solely and exclusively responsible for the following. This responsibility is continuous and is not limited to working hours:

1. Construction means, methods, sequences, techniques, and procedures.
2. Health, safety, and security of worker engaged in the work while on and off the site.

3. Health, safety, and security of the City, the public, the Engineer, the Design Engineer, and others who may visit or be affected by the work.
4. Safety and security of the work itself including material and equipment to be incorporated therein.
5. Security of other property at the site or adjacent thereto.
6. Health, safety, and security programs, equipment and protective devices required to assure the safety of persons and property for whom/which the Contractor is responsible.

E. All workers allowed on-Site by Contractor or its subcontractor will have the appropriate health and safety training, medical monitoring, and personnel protective equipment as require by the Contractor's Health and Safety Plan and will comply with all other provisions of the Contractor's Health and Safety Plan.

F. The Contractor shall, at all times, maintain the job in a condition that is safe for the Owner, the Engineer and their Consultants to make site visits and to conduct construction reviews. If the Owner or the Engineer cannot allow personnel to visit the job because it is not safe, the Contractor is not providing required safe access to the Work as required by General Conditions, and observation of the work for progress payment

G. Design Engineer, Owner's Representative and Owner will not review Contactor's submitted Health and Safety Plan to verify conformance with Laws and Regulations. Such submittal will not in any way relieve Contactor of Contractor's complete and continuous responsibility and duty for Site health and safety and security.

H. Contractor will keep a copy of its corporate Health and Safety Plan and the site-specific Health and Safety Plan on-Site and update it as appropriate.

I. The Contractor is hereby informed that work on this project could be hazardous. The Contractor shall carefully instruct all personnel working in potentially hazardous work areas as to potential dangers and shall provide such necessary safety equipment and instructions as required to prevent injury to personnel and damage to property, and to comply with all applicable laws and regulations including State OSHA, Federal OSHA, and other regulations referenced in these Contract Documents.

J. In addition to the requirements of the Contractor's Health and Safety Plan and Laws and Regulations, the Contractor will conduct the following:

1. Site Control: For the duration of the Project, the Contractor will assume full responsibility for Site health and safety and for Site security. The Contractor's responsibility and authority will be continuous and not limited to work hours.

2. Health and Safety Instructions: At the beginning of work on the Site and as necessary thereafter, the Contractor will instruct all workers, the Owner, the Owner's Representative, and visitors regarding health and safety measures.

3. Site Security: The Contractor's activities will not reduce the present level of Site security. If existing fences are removed or damaged as part of the work, then equivalent protection will promptly be provided until said fences are repaired or replaced, including temporary fencing or additional patrols as necessary. The Contractor will implement security measures that are necessary or potentially necessary to protect the Contractor's materials and equipment, or to prevent access to hazardous or potentially hazardous materials exposed during the work.

4. No Relief: From time to time, Owner, Owner's Representative, or other Site visitors may or may not comment on Contractor's health and safety plan or measures. None of the actions of the Design Engineer, Owner's Representative, Owner, or Site visitors will serve to relieve Contractor of its complete and continuous responsibility for Site health and safety and security.

1.13 - PROTECTION OF INSTALLED WORK AND EXISTING FACILITIES

A. Contractor will provide temporary and removable protections for installed products and completed work. Control activity in immediate work area to minimize damage and between work zones using temporary chain link fence, traffic barricades and caution tape, or other appropriate method.

B. Provide temporary and removable protection for existing facilities. Use protective barriers such as wood or steel mats, steel plates, etc. to protect existing facilities from damage.

EXECUTION

2.01– WORK ZONE

A. During construction, maintain the Site and all work in a clean orderly fashion for waste, debris, and rubbish. Contractor will patrol the Site and collect rubbish and trash daily. Pick up and store debris in covered containers. Burning debris on Site in not permitted.

B. Contractor will clean mud from vehicles before leaving the Site. See Section 01140 Environmental Protection.

C. Employ measures to prevent the creation of dust that may cause damage or nuisance to property or persons in accordance with Section 01500 Construction Facilities and Temporary Controls. Contractor is responsible for all damage resulting from dust produced by construction activities.

D. Employ measures to prevent erosion and trap any sediment created by construction activities before it leaves the Site. See Section 01140 Environmental Protection.

E. Avoid creating conditions conducive to pests and rodents. Comply with Laws and Regulations governing the use of chemicals to control pests and rodents.

F. Maintain excavations free of water.

G. Contractor will protect all utilities that may be present within the work area.

2.02– PARKING OF VEHICLES AND EQUIPMENT

A. Contractor will park all equipment and vehicles not currently in use within the Limits of Work designated on Contract Drawings.

2.03–SPILL PREVENTION AND CONTROL

A. The Contractor shall keep a stockpile of spill cleanup materials, such as rags or absorbents appropriate for the materials and equipment being used, readily accessible on-site. Other spill clean-up materials may include storm drain cover mats, portable dikes, and portable pumps.

B. The Contractor shall immediately contain and prevent leaks and spills from entering storm drains, and properly clean up and dispose of the waste and cleanup materials. If the waste is hazardous, the Contractor shall handle waste in accordance with applicable rules and regulations.

C. The Contractor shall not wash any spilled material into streets, gutters, storm, drains, or creeks and shall not bury spilled hazardous materials.

D. The Contractor shall immediately report any hazardous materials spill or release to the City of Burlingame Fire Department at 9-1-1 or (650) 672-0313.

2.04– SITE MAINTENANCE

A. During all activities, Contractor will not permit dirt or debris to accumulate within the Site access and egress points. Contractor will promptly provide street sweeping or other methods satisfactory to the Owner's Representative to remove all soils, dirt, rock, asphalt, and other deposits that accumulate at the Site and driveways, sidewalks, and public roads that are a result of the Contractor's operations. This includes windblown deposits, spillage, and tracking of material onto the roads. Streets will be swept at least once daily during times when there are more than four truckloads hauling soil or debris in a day. Contractor will inspect the roads at least twice daily during hauling operations, at noon and at the end of each shift. When the inspection by Contractor or Owner's Representative determines that cleaning is required, cleaning will be performed immediately. See Section 01140 Environmental Protection.

B. At the end of each day, the Contractor will perform the following:

1. Secure the Site;
2. Cover any soil or debris stockpiles in accordance with Section 01140 Environmental Protection on the Site;
3. Store equipment;
4. Disconnect water and power except as need for health and safety and security;
5. Position or implement any appropriate measures in accordance with Section 01140 Environmental Protection; and

2.05– FINAL CLEANUP AND DEMOBILIZATION

A. Upon completion of the Work, the Contractor will remove all materials and equipment brought to the Site that is not permanently installed as part of the Work. See Section 01700 Construction Closeout.

B. Contractor will:

1. Remove any temporary fencing that was installed,
2. Repair any damage cause by Contractor's activities to perimeter fences, buildings, streets, curbs, landscaping, or any other part of the Site,
3. Clean all equipment, vehicles, or other items that have entered the Site, and
4. Leave the Site clear of all debris.

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

1.01 TEMPORARY UTILITIES

A. Sanitary Facilities: Provide and maintain self-contained portable sanitary facilities for the Contractor's, subcontractors', Engineer's, and Owner's use. Facilities shall comply with applicable regulations and shall be serviced, cleaned and disinfected frequently.

B. Temporary Water, Power, and Telephone Service:

1. No power, water or telephone service will be provided to the contractor.

C. Temporary Lighting: Provide and maintain lighting for construction operations to achieve a minimum lighting level of 20-foot candles for rough work and 60-foot candles for finish work.

D. Temporary Fire Protection:

1. Provide and maintain fire protection equipment, including extinguishers, fire hoses, and other equipment required by law, insurance carriers, or necessary for proper fire protection during the course of the work.
2. Use fire protection equipment only for fighting fires.
3. Locate fire extinguishers in field offices, storage sheds, tool houses, temporary buildings, and throughout the construction site.

1.02 TEMPORARY CONSTRUCTION

A. The Contractor is solely and exclusively responsible for the design, construction and maintenance of all temporary construction including forms, falsework, shoring, scaffolding, stairs, ladders and all other similar items.

1.03 BARRICADES, FENCES AND ENCLOSURES

A. Barricades: Provide temporary guard rails, ladders, stairs, guards, and barricades to protect persons in accordance with applicable regulations, including California Code of Regulations Title 8 and Cal/OSHA.

B. Fences:

1. Existing fences enclose portions of the present facilities site. The fences are for the protection and security of the present operating facilities. If it is necessary for the Contractor to remove some of the fences for installation of new work, the Contractor shall provide equivalent temporary protection and security. Replace fencing removed by the Contractor with new fencing of equivalent quality prior to completion.

1.04 PROTECTION OF INSTALLED WORK AND EXISTING FACILITIES

A. Provide temporary and removable protection for installed products and completed work. Control activity in immediate work area to minimize damage.

B. Provide temporary and removable protection for existing facilities. Use protective barriers such as wood or steel mats, steel plates, etc. to protect existing facilities from damage.

1.05 SECURITY

A. Provide security and facilities to protect the Work, and existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

1.06 TEMPORARY CONTROLS

A. Cleaning:

1. During Construction: Maintain the site and all work in a clean orderly fashion free of waste debris and rubbish. Store debris in covered containers. Pick up and remove debris daily if required, but not less frequently than weekly. Burning debris on site is not permitted. Remove debris from permanently closed spaces prior to enclosing them. Clean mud from vehicles before leaving the site.

2. If work under this Contract creates dusty, dirty or unsightly conditions in adjacent areas, the Contractor shall immediately cleanup the affected areas.

3. Final cleanup is specified in Section 01700.

B. Dust Control: Employ measures to prevent the creation of dust which may produce damage or nuisance to property or persons. Be responsible for all damage resulting from dust produced by construction operations. Periodically wet down unpaved areas where vehicles are operated. See Earthwork specification sections.

C. Erosion and Sediment Control: Employ measures to prevent erosion and trap any sediment created by construction operations before it leaves the site. Prevent sediment from entering streams or other water bodies. See Section 01140.

D. Pest and Rodent Control: Avoid creating conditions conducive to pests and rodents. Comply with regulations governing the use of chemicals to control pests and rodents.

E. Water Control: Maintain excavations free of water.

END OF SECTION

SECTION 01700

CONSTRUCTION CLOSEOUT

1.01 SUMMARY

A. The work in the section includes all materials and labor associated with conducting final site cleanup at the completion of work to the satisfaction of the Engineer and in accordance to section 4-1.13, Cleanup, of the standard specifications.

1.02 FINAL CLEANUP

A. Prior to Final Inspection, clean the entire construction area and all other areas affected by the performance of work under this Contract. Perform cleaning using personnel specializing in and skilled in cleaning and maintenance work. Perform repair work using personnel skilled in executing the type of work being repaired. Perform all work to the highest trade standards applicable to that type of work.

1. Remove all temporary construction, signs, tools, equipment, excess material and debris.
2. Remove all lumps, splatters, spots and stains caused by paint, adhesive, asphalt, concrete, mortar, sealant or other foreign material from exposed or finished surfaces. Remove all temporary labels.
3. Repair, patch or replace new or existing work including, landscaping, plant materials and other items that have been damaged, broken, cracked or chipped as a result of performing this Work.
4. Sweep clean and wash down all exterior concrete. Remove all hazardous material and material that may cause sediment in drainage systems prior to wash down. Remove all grease and oil stains on concrete caused by Contractor's equipment.

1.03 CONTRACTOR'S ACTION LIST OF ITEMS TO BE CORRECTED AND/OR COMPLETED

A. During construction, the Contractor shall maintain an action list of items to be corrected and/or completed. The Contractor shall regularly add items and update the list as information becomes available or as requested by the Engineer. The Contractor shall deliver a current copy of the list to the Engineer at each progress meeting.

1.04 SEMIFINAL INSPECTION/SUBSTANTIAL COMPLETION

A. Definitions

1. “Substantial Completion” means that the work has progressed to the point that: (1) the Work is ready for beneficial use and occupancy by the Owner for the intended purpose, (2) all fire and life safety work has been completed, inspected and

accepted, (3) all mechanical and process systems and equipment are complete and have been put in automatic operation, (4) the total value of uncompleted work is less than one-half of one percent of the Contract Price and (5) completing the Work will not significantly interfere with the Owner's convenience, use or cost of operation.

2. "Semi-Final Inspection" determines if the Work is Substantially Complete.
3. "Final Inspection" determines if the Work has reached final Completion.
4. "Final Completion" indicates that the Work has been fully completed in accordance with the Contract Documents and is ready for acceptance and final payment by the Owner.
5. "The Final Punch List" contains items that remain uncompleted after Substantial Completion but that must be completed prior to Final Completion.

B. When the Contractor considers the Work nearly complete, the Contractor shall review the Contract Documents, inspect the Work, and use the Contractor's action list to prepare a Contractor's Punch List of all deficient or uncompleted items. The Contractor shall complete or correct items on the Punch List. When the Work is Substantially Complete, the Contractor shall notify the Engineer in writing that the Contractor has reviewed the Contract Documents, inspected the Work and believes that the Work is Substantially Complete and ready for Semifinal Inspection.

C. On receipt of the Contractor's Punch List and notice that the work is ready for Semifinal Inspection, the Engineer will inspect the Work. The Engineer may add additional items to the Contractor's Punch List, may find that the work is not ready for inspection, is ready for inspection but not Substantially Complete or that the Work is Substantially Complete. When the Engineer finds the Work is Substantially Complete, it will prepare a Final Punch List and a notice of Substantial Complete, which will state the date of Substantial Completion and the time agreed to by the Owner and the Contractor (not to exceed 30 days) in which the Work shall be fully complete and ready for Final Inspection.

1.05 FINAL INSPECTION, FINAL COMPLETION AND FINAL PAYMENT

A. When the Contractor has completed or corrected all the items on the Engineer's Final Punch List, the Contractor shall give the Engineer written notice that the Work is ready for Final Inspection. When the Engineer finds the Work acceptable and fully complete in accordance with the Contract Documents, and upon receipt of a final Application for Payment and all final submittals, the Engineer will recommend that the Owner issue a Notice of Final Completion, make Final Payment and Accept the Work stating that to the best of the Engineer's knowledge, information and belief, and on the basis of the Engineer's observations and inspection, the Work has been fully completed in accordance with the terms and conditions of the Contract Documents.

B. Final Submittals include:

1. Operation and Maintenance Manuals and Parts Lists
2. Record Drawings
3. Extra Materials
4. Special Guarantees
5. Insurance Certificate showing required continuation of coverage beyond Final Payment.
6. Release of Liens.
    a. Within 10 Days after the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner to defend and indemnify the Owner against such liens, the Owner shall accept the Work and file a Notice of Completion. Final Payment shall not become due until 60 days after the Owner files a Notice of Completion and there being no liens or stop notices filed. If any lien or stop notice remains unsatisfied, the Contractor shall immediately take all the steps necessary to remove all liens or stop notices before Final Payment is made. If any liens are filed or exist after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such liens, including all costs and reasonable attorneys' fees.
7. Waiver of Claims by Contractor.
    a. The making of Final Payment shall constitute a waiver of claims by the Owner except those arising from:
        (i) Liens, claims, security interests or encumbrances arising out of the Contract and unsettled;
        (ii) Failure of the Work to comply with the requirements of the Contract Documents; or
        (iii) Terms of the one-year guarantee period and special warranties required by the Contract Documents.
        (iv) Any of the Contractor's continuing obligations under the Contract Documents.
8. And any other submittals required by the Contract Documents and not previously received.

C. The Owner will record the Notice of Final Completion at the County Recorders Office.

D. The Owner will make Final Payment to the Contractor 35 days after recording the Notice of Final Completion.

1.06 RECORD DRAWINGS

A. The Contractor shall maintain on the jobsite, a complete set of Contract Documents and a complete file of all addenda, contract modifications and favorably reviewed submittals. The Contractor shall prepare a set of Record Drawings concurrently with the construction of the Work and in accordance with the following:

1. Show the invert elevation of all gravity piping and the top of pipe, top of conduit or top of protective concrete encasement for other utilities. Elevations shall be related to a permanent visible elevation benchmark set at the site by the Contractor.

2. Show the horizontal location of underground utilities measured from permanent visible physical features such as face of building, face of tank, centerline of manhole, or by coordinates based on the project datum.

3. Comply with detailed requirements in technical specification sections describing the type of information required on Record Drawings. The Contractor's copy of Contract Documents, Contract modifications and Record Drawings shall be available to the Engineer for weekly verification that the records are being currently updated.

1.07 TWELVE-MONTH INSPECTION

A. Thirty (30) days prior to the expiration of the one-year guarantee period, the Contractor shall tour the project with the Engineer and/or the Owner to prepare a list of corrective work required under the 12-month guarantee. The Contractor shall correct all items found to be defective within 20 days of receipt of the list of items to be corrected.

END OF SECTION

SECTION 02459
EARTH MOVING

PART 1 - PRODUCTS (NOT USED)

1.01. SUMMARY

A. Section Includes:

- Excavating soil and other material for surface improvements.
- Placing fill.
- Compaction of existing ground and fill.
- Preparation of subgrade for improvements.
- Grading of soil.

1.02. RELATED SECTIONS

A. 31 11 00 Clearing and Grubbing

B. 31 23 33 Trenching and Backfilling

1.03. REFERENCES

A. California Test Method No. 216 (Dry Method)

1.04. DEFINITIONS

A. Utility: Any buried or above ground pipe, conduit, cable, associate device or appurtenances, or substructure pertaining thereto.

1.05. COORDINATION

A. Coordinate work with affected trades.

B. Verify the location of existing utilities have been indicated at work site by utility authorities.

1.06. EXISTING UTILITIES

A. The Engineer has made a diligent attempt to indicate on the plans the location of all main and trunk-line utility facilities which may affect the Work. The location of said facilities, therefore, shall be considered approximate only, until exposed by the Contractor.

B. Service laterals and appurtenances have also been shown where information was available as to their location. The location of said facilities, therefore, shall be considered approximate only, until exposed by the Contractor.

C. At new work location, expose by hand methods all existing utilities along the route of the new work prior to using any mechanical equipment. If mechanical equipment is allowed at a particular location, it may only be used after the completion by the Contractor of a successful exhaustive search by hand methods to locate all existing facilities as indicated on the plans, and as indicated at the work site by utility companies.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01. EXAMINATION

A. Verify site conditions.

3.02. PREPARATION

A. Identify required lines, levels, contours and datum.

B. Locate, identify, and protect existing above and below grade utilities from damage.

C. Protect plant life, lawns, trees, shrubs, and other features not authorized for removal.

D. Protect existing structures, fences, sidewalks, paving, curbs and other improvements to remain from damage from excavation equipment and vehicular traffic.

E. Employ equipment and methods appropriate to the work site.

F. Protect excavated areas from drainage inflow, and provide drainage to all excavated areas.

G. All topsoil, vegetation, organics, and debris should be removed from the proposed improvement areas. The general depth of stripping should be sufficiently deep to remove the root systems and organic topsoil. The actual depth of stripping should be reviewed by the Geotechnical Engineer at the time of construction. Deeper stripping may be required in localized areas. These materials will not be suitable for use as engineered fill.

H. If Contractor locates any abandoned foundations, floor slabs, debris pits, uncontrolled fills, and subsurface structures during the course of the work, these soils or structure should be entirely removed. The resulting excavations

should be cleaned of all loose or organic material; the exposed native soils should be scarified to a depth of 6-inches, moisture conditioned. The excavation should be backfilled with engineered fill.

I. All contaminated soil must be handled in accordance with the approved Soil and then compacted per the recommendation provided in soils report for this project. Where trees are to be removed, the removal should include all major roots systems over 1-inch in size.

J. The exposed ground surface in areas to receive engineered fill material should be scarified to a depth of 6-inches; moisture conditioned and then compacted per the recommendations of the Geotechnical Engineer. The scarification and compaction should be conducted following stripping operations, removal of subsurface structures and removal of all soft or pliant areas.

K. Repair completely, at no additional cost to the owner, any soft, spongy or otherwise unstable areas encountered in the subgrade and as determined by the Geotechnical Engineer, by over excavating, removing the material and replacing it with acceptable materials in conformance with this section.

L. All fill required to bring the site to final grade should be placed as engineered fill. In addition, all native soils over excavated should be compacted as engineered fill.

M. Fill materials to conform to the applicable specifications.

3.03. EXCAVATION

A. Excavate soil to finish subgrade of improvements (or layer thereof) to be placed thereon, or to finish surface grade where no improvements are to be placed thereon.

B. Conform excavation to the lines, grades and cross sections shown on the plans.

C. When excavating through tree roots, perform work by hand and as recommended by the City Arborist.

D. Stockpile and remove excess soil not to be used as fill in the Work from the site at no additional cost to the Owner.

3.04. ENGINEERED FILL

A. Utilize equipment which will not disturb or damage existing utilities and other improvements.

B. Maintain optimum moisture content of materials to attain required compaction density.

C. Compact in layers not exceeding eight inches (8”) in uncompacted thickness.

D. Meet the compaction and moisture content requirements provided in the table below:

	Relative Compaction	Moisture content
• Scarified Subgrade in areas to receive structural fill.	88-92 percent	At least 3percent above optimum
• Structural fill composed of native soil.	88-92 percent	At least 3 percent above optimum
• Structural fill composed of non-expansive fill	90 percent	Above optimum
• Fills below a depth of 4-feet.	92 percent	2 to 3 percent above optimum

3.05. FINE GRADING

A. Fine grade all finished surfaces to the lines, grades and cross sections shown on the plans.

B. Make gradual grade changes. Blend slopes into level areas.

C. Rake and smooth all finished surfaces not to receive surface improvements.

3.06. TOLERENCES

A. Top surface of Subgrade for Non Vegetative Surface Improvements or Layers Thereof: Plus or minus 0.05 foot from planned elevation.

B. Compaction testing will be performed in accordance with California Test Method No. 216 (Dry Method).

C. If tests indicate work does not meet specified requirements, recompact, or remove and replace, and retest.

3.07. FIELD QUALITY CONTROL

A. Field inspection and testing will be performed as required by the owner and the Town of Los Altos Hills.

B. Compaction testing will be performed in accordance with California Test Method No. 216 (Dry Method).

C. If tests indicate work does not meet specified requirements, recompact, or remove and replace, and retest.

3.08. PROJECT RECORD DOCUMENTS

A. Accurately record actual locations of utilities encountered.

END OF THIS SPECIFICATION

SECTION 02315

EXCAVATION AND FILL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Perform all excavation of soil and other materials for surface improvements, Placing Fill, Compactions of existing ground and fill, preparation of subgrade for improvements, grading of soil, shoring, grading necessary or required for the construction of the work as covered by these Specifications and indicated on the Project Engineers' or City's Standard Drawings as submitted to and accepted by the City. The excavation shall include the removal and disposal of all materials of whatever nature encountered, including water and all other obstructions that would interfere with the proper construction and completion of the required work.

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM).

B. State of California, Department of Transportation, Standard Specifications - 2010.

C. State of California, Department of Transportation, Manual of Test (California Test).

1.03 SUBMITTALS

A. Submit the following under the Product Information category.

1. Potholing Report as described in Paragraph 3.02.

2. Samples and Test Results: Furnish such quantities of import materials as may be required by the City for test purposes. Cooperate with the City and furnish necessary facilities for sampling and testing of all materials and workmanship. Submit test results for import materials. Tests shall be performed within 30 days of the submission. All material furnished and all work performed shall be subject to rigid inspection, and no material shall be delivered to the site until it has been favorably reviewed by the City.

3. Name and qualifications of independent testing laboratory.

1.04 QUALITY ASSURANCE

A. Source Quality Control: Test import materials proposed for use to demonstrate that the materials conform to the specified requirements. Tests shall be performed by an independent testing laboratory.

B. Field Quality Control:

1. The City will:

a. Review materials proposed for use.

b. Inspect foundations and site grading.

c. Inspect placement and compaction of fill as follow:

i The City requires one compaction test every 50 linear feet of wall installed. More frequent tests may be required if compaction test results do not meet the project requirements, in addition areas not meeting compaction requirements shall be recompacted and retested.

C. Testing Methods:

1. Durability Index: Manual of Test, State of California, Department of Transportation.

2. Specific Gravity: ASTM D854.

3. Laboratory Compaction: ASTM D1557, Method A or C.

4. In-Place Density: ASTM D1556 or ASTM D2922.

5. Particle Size Analysis of Soils: ASTM D422.

6. Plastic Limit and Plasticity Index: ASTM D4318.

7. Soil Classification: ASTM D2487.

8. In-Place Moisture Content: ASTM D3017.

D. Definition:

1. Relative Compaction: In-place dry density divided by the maximum dry density laboratory compaction express as a percentage.

1.05 REFERENCE SPECIFICATIONS

A. Whenever the words "Standard Specifications" are referred to, the reference is to the State of California, Department of Transportation, and Standard Specifications - 2010 edition.

1.06 ADDITIONAL SAFETY RESPONSIBILITIES

A. The Contractor shall select, install and maintain shoring, sheeting, bracing, and sloping as necessary to maintain safe excavations. The Contractor shall be responsible for ensuring such measures: (1) comply fully with 29 CFR Part 1926 OSHA Subpart P Excavations and Trenches requirements, (2) provide necessary support to the sides of excavations, (3) provide safe access to the City for sampling and testing within the excavation, (4) provide safe access for backfill, compaction, and compaction testings, and (5) otherwise maintain excavations in a safe manner that shall not endanger property, life, health, or the project schedule. All earthwork shall be performed in strict accordance with applicable law, including local ordinances, applicable OSHA, Cal OSHA, California Civil Code, and California Department of Industrial Relations requirements.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Crushed Rock: Class 2, 3/4-inch maximum aggregate base, Standard Specifications Section 26.

B. Native Fill: Native soil prepared as necessary to be free from clods or rocks larger than 4 inches in greatest dimension, and free from organic material.

C. Engineered Fill: Fill Material Should be a natural soil or natural soil-rock mixture free from organic matter or other deleterious substances, fill material should not contain rocks or lumps over 4 inches in greatest dimension, fill material should have low expansion potential and a plasticity index (PI) less than 15, Fill material should have a minimum R- value of 20., fill material should have a fines content between 15 and 65 percent (particles passing the no.200 sieve).

D. Water: The water used shall be reasonably free of objectionable quantities of silt, oil, organic matter, alkali, salts and other impurities. Water quality must be acceptable to the City.

PART 3 - EXECUTION

3.01 CONTROL OF WATER

A. All excavations shall be kept free from water and all construction shall be in the dry.

1. It should be presumed that the presence of groundwater will require dewatering operations. Furnish, install, maintain, and operate all necessary pumping and other equipment for dewatering all excavations.

2. Dispose of water in such a manner as to cause no injury or nuisance to public or private property, or be a menace to the public health.

3. The dewatering operation shall be continuous, so that the excavated areas shall be kept free from water during construction, while concrete is setting and

achieves full strength, and until backfill has been placed to a sufficient height to anchor the work against possible flotation.

4. Continue dewatering during backfilling operations such that the groundwater is at least 1 foot below the level of the compaction effort at all times. No compaction of saturated materials will be allowed.

5. Dewatering devices must be adequately filtered to prevent the removal of fines from the soil.

6. The Contractor shall be responsible for any damage to the foundations or any other parts of existing structures or of the new work caused by failure of any part of the Contractor's protective works. After temporary protective works are no longer needed for dewatering purposes, they shall be removed by the Contractor.

7. If pumping is required on a 24-hour basis, requiring engine drives, then engines shall be equipped in a manner to keep noise to a minimum in accordance with Section 7 of the City of Burlingame, General Conditions, latest edition.

8. Prevent disposal of sediments from the soils to adjacent lands or waterways by employing whatever methods are necessary, including settling basins.

B. The Contractor shall be responsible for furnishing temporary drainage facilities to convey and dispose of surface water falling on or passing over the site.

C. These requirements are intended to be consistent with the Bay Area Air Quality District standard mitigation requirement, Federal Clean Water Act, the Porter-Cologne Water Quality Control Act, and the San Mateo County Stormwater Prevention Program. Notwithstanding any other provision of this Agreement, Contractor shall also comply with the General Construction Activity Permit.

1. The Contractor shall maximize the control of erosion and sediment by using the BMP's for erosion and sedimentation in the California Storm Water Best Management Practice Handbook-Construction Activity (published by the Storm Water Quality Task Force) or Manual of Standards for Erosion & Sediment Control Measures (published by the Association of Bay Area Governments (ABAG)).

2. The Contractor shall prepare a Storm Water Pollution Prevention Plan in conformance with the requirements of the State Water Resources Control Board (SWRCB). The Contractor is not required to file a Notice of Intent (NOI) with the SWRCB as the project does not meet the requirements to trigger the need for a Construction General Permit

3.02 EXISTING UTILITIES

A. General: The known existing utilities and pipelines are shown on the Drawings prepared by the Project Owner's Engineer. The Contractor shall exercise care in

avoiding damage to all utilities as he/she will be held responsible for their repair if damaged.

1. Contact Underground Services, Alert (USA), (800) 642-2444 to mark utilities, 48 hours prior to excavating and drilling.

B. Check on Locations (Potholing):

1. Contact all affected utility owners and requests them to locate their respective utilities prior to the start of "potholing" procedures. The utility owner shall be given 7 days written notice prior to commencing potholing. If a utility owner is not equipped to locate its utility, the Contractor shall locate it.

C. Interferences:

1. If interferences occur at locations other than shown on the Project Engineer's Drawings, the Contractor shall notify the City, and a method for correcting said interferences shall be supplied by the Project Owner's Engineer.

3.03 GENERAL CONSTRUCTION REQUIREMENTS

A. Site Access: Access to the site will be over public and private roads. Exercise care in the use of such roads and repair at own expense any damage thereto caused by Contractor's operations. Such repair shall be to the satisfaction of the owner or agency having jurisdiction over the road. Conform to Caltrans requirements relative to SWMPP Best Management Practice to prevent tracking of mud onto existing roads and keep roads free of debris.

B. Barriers: Barriers shall be placed at each end of all excavations and at such places along excavations as may be necessary to warn all pedestrian and vehicular traffic of such excavations. Lights shall also be placed along excavations from sunset each day to sunrise of the next day until such excavation is entirely restored.

C. Access: Free access must be maintained to all fire hydrants, water valves and meters, and private driveways.

D. Dust Control: Employ measures to prevent the creation of dust which may produce damage or nuisance to property or persons. Be responsible for all damage resulting from dust produced by construction operations. Periodically wet down unpaved areas where vehicles are operated. When required by the City, the Contractor shall furnish and operate a self-leading motor sweeper with spray nozzles at least once each working day for the purpose of keeping paved areas acceptably clean wherever construction, including restoration, is incomplete.

E. Permits: Obtain all required permits and pay associated fees.

F. Storage of Materials: Excavated materials unsuitable for backfill shall not be stored on existing streets, and shall be disposed of immediately. Keep the materials shaped so as to cause the least possible interference with drainage or the normal use of adjacent properties, structures or roadways. Work shall comply with Section 6 of the City of Burlingame General Conditions, latest edition, and City of San Mateo and County of San Mateo's requirements.

3.04 SUPPORT OF EXCAVATIONS

A. Adequately support excavation for retaining wall and access road shall meet all applicable requirements in the current rules, orders and regulations. Excavation shall be adequately shored, braced and sheeted so that the earth will not slide or settle and so that existing ground will be fully protected from damage. Keep vehicles, equipment and materials far enough from the excavation to prevent instability.

B. Take all necessary measures to protect excavations and adjacent improvements from running, caving, boiling, settling, or sliding soil resulting from the high groundwater table and the nature of the soil excavated. Attention is directed to Section 832 of the Civil Code of the State of California relating to lateral and subjacent supports, and wherever structures or improvements adjacent to the excavation may be damaged by such excavation, the Contractor shall comply with this law.

C. The support for excavation shall remain in place until the construction of the retaining wall and concrete piers has been completed. During the backfilling of the concrete piers, the shoring, sheeting and bracing shall be carefully removed so that there shall be no voids created and no caving, lateral movement or flowing of the subsoils.

D. Excavate soil to finish subgrade of improvements (or layer thereof) to be placed thereon, or to finish surface grade where no improvements are to be placed Theron.

E. Conform excavation to the lines, grades and cross sections shown on the plans.

F. When excavation through tree roots, perform work by hand and as recommended by the Geotech engineer.

3.05 FINISH GRADING

A. Except where shown otherwise in the Project Engineer's Drawings, restore the finish grade to the original contours and to the original drainage patterns. Grade surfaces to drain away from structures. The finished surfaces shall be smooth and compacted.

3.06 ENGINEERED FILL

A. Maintain optimum moisture content of materials to attain required compaction density. Compact in layers no exceeding eight inches in uncompacted thickness, meet the compaction and moisture content requirements provided in the table below:

3.07 DISPOSAL OF EXCAVATED MATERIAL

A. Suitably dispose of unsuitable material or excavated material in excess of that needed for backfill offsite in accordance with all applicable laws and regulations.

END OF SECTION

SECTION 02459

CAST-IN–PLACE CONCRETE PILES

PART 1 – GENERAL

1.01 DEFINITIONS

A. The words and terms used in these Specifications conform to the definitions given in ACI 336.1.

B. The terms “drilled shaft” and “cast in drilled hole (CIDH) piles” are used interchangeably.

1.04 REFERENCES

A. International Association of Foundation Drilling (formerly Association of Drilled Shaft Contractors) (ADSC):

1. ADSC Standards and Specifications for the Foundation Drilling Industry

B. American Concrete Institute (ACI):

1. ACI 336.1 Specification for the Construction of Drilled Piers

C. American Society for Testing and Materials (ASTM):

1. ASTM D1143/D1143M Standard Test Methods for Deep Foundations Under Static Axial Compressive Load
2. ASTM D3689/D3689M Standard Test Methods for Deep Foundations Under Static Axial Tensile Load
3. ASTM D3966/D3966M Standard Test Methods for Deep Foundations Under Lateral Loads
4. ASTM D6760 Standard Test Method for Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing

D. California Code of Regulations:

1. Title 24, Part 2, California Building Code, Chapter 18, Soils and Foundations

1.05 SUBMITTALS

A. Concrete Reinforcement: Provide submittals in accordance with the requirements of Concrete Reinforcing.

B. Concrete: Provide submittals in accordance with the requirements of Cast-in-Place Concrete. Include submittal for concrete equipment and placement method.

C. Drilling Equipment: Submit description of equipment including but not limited to power rating, torque, downward thrust, and type and size of drilling tools to be used.

D. Records and Reports: Submit daily reports and shaft record reports or logs as required by ADSC's "Standards and Specifications for the Foundation Drilling Industry," using ADSC formats for forms.

1.06 QUALITY ASSURANCE

A. Construction Standards: Drilled shaft foundations shall be constructed in accordance with applicable requirements of ACI 336.1 and ADSC's "Standards and Specifications for the Foundation Drilling Industry."

B. Design Criteria:

1. Drilled shaft foundations shall consist of monolithically cast-in-place concrete piles of the sizes indicated.

2. Shaft foundations shall be straight cylindrical shaft type as indicated.

3. Shaft foundations shall extend from the indicated concrete cutoff elevation to the indicated tip elevation.

C. Tolerances:

A. Maximum variation of the center of any shaft foundation from the required location: 3 inches, measured at the ground surface.

B. Bottom Diameter: minus zero, plus 6 inches, measured in any direction.

C. Maximum variation from plumb: 1 (horizontal):40 (vertical).

D. Maximum bottom level tolerance: plus or minus 2 inches.

D. Inspection of Shaft Excavations:

A. The Contractor shall provide equipment for checking the dimensions and alignment of each shaft excavation. Dimensions and alignment shall be determined jointly by the Contractor and the Engineer. Final shaft depths shall be measured with an appropriate weighted tape measure or other approved method after final cleaning.

B. A minimum of 50 percent of the base of each shaft shall have less than 1/2 inch of sediment at the time of placement of concrete. Maximum depth of sediment or debris at any place on the base of the shaft shall not exceed 1-1/2 inches. Shaft cleanliness will be determined by the Engineer by visual inspection.

1.07 SEQUENCING AND SCHEDULING

A. Unless otherwise permitted by the Engineer, the Contractor shall schedule drilling or excavating, installation of reinforcing steel and concrete placement so that each excavated shaft is poured the same day that the drilling is performed.

B. Do not permit vibration or excessive wheel loads within the immediate vicinity of any shaft excavation until placement of concrete is complete. Maintain excavation stability at all times.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Concrete Reinforcement: Conform to applicable requirements of Concrete Reinforcing, of grades and sizes indicated.

B. Concrete: Conform to applicable requirements of Section Cast-in-Place Concrete. Provide class of concrete indicated on the Contract Drawings.

1. Prepare separate mix designs for each class of concrete.

2. Slump for concrete: Slump shall be 5 inches plus or minus 1 inch for dry shafts without temporary casing, and 7 inches plus or minus 1 inch for dry shafts with temporary casing. C. Steel Casing:

C. Where earth wall of drilled shaft is unstable or has a tendency to slough, crumble, or fall away, provide temporary steel casing to stabilize the shaft wall.

D. Inside diameter of the casing shall be the full diameter of the drilled shaft foundation as indicated, plus or minus 1/2 inch.

E. Steel casing shall have adequate strength to withstand the pressure of concrete placement without distortion.

F. Inside surfaces of steel casing shall be smooth and coated to facilitate easy lifting and removal during placement of concrete.

2.02 EXCAVATING AND DRILLING EQUIPMENT

A. Excavating and drilling equipment shall have adequate capacity, including power, torque, and down thrust to excavate a hole of the maximum diameter and to a depth of 20 percent beyond the depth indicated. Excavation and overreaming tools shall be of adequate design, size, and strength to perform the work indicated.

B. When the material encountered cannot be drilled using conventional earth augers or overreaming tools, special drilling equipment shall be provided, including rock core barrels, rock tools, air tools, and other equipment as necessary to construct the shaft excavation to the size and depth indicated.

PART 3 – EXECUTION

3.01 EXCAVATION

A. General:

1. Excavate for shaft foundations by drilling or by other methods, as approved by method test shafts, to advance the excavation to the required bottom elevation as indicated on the Contract Drawings or as directed by the Engineer. Avoid over excavation. Excavation shall be performed through whatever materials are encountered to the dimensions, depths, and tolerances indicated. Bottoms of excavations shall be level and flat.

2. When required by the Engineer, drill and core an exploratory hole, approximately 3 to 4 inches in diameter, to a depth of 15 feet below the excavation invert and backfill with grout.

3. Protect excavated walls with temporary steel casing as necessary to prevent cave-ins, displacement of the surrounding earth, water incursion, injury to personnel, and damage from construction operations. Maintain indicated neat lines of excavation for cased areas.

4. Make bottom surfaces level within the tolerances specified herein. Remove loose material, debris, and muck with cleaning buckets.

B. Ground Water Control:

1. Notify the Engineer immediately when ground water is encountered.
2. Suitable steel casings shall be furnished and placed when necessary to control water. Drilling mud or chemical stabilizers shall not be used unless permitted by the Engineer

C. Inspection: After completion of excavation and prior to placement of reinforcing steel, the condition of the excavation will be inspected by the Engineer. Use clean-out buckets or air-lifts to remove any slough or other loose material from the shaft prior to placing reinforcing steel and concrete. An accumulation of soil or rock in the bottom of the excavation will not be permitted.

3.04 INSTALLATION OF CONCRETE REINFORCEMENT

A. Where it is not practicable to deliver the cage assembly to the jobsite as a complete unit ready for installation, make the remaining connections or splices, as indicated on the approved Shop Drawings, at-grade prior to lowering the assembly into the hole.

B. Lower reinforcing steel into the hole in such a manner as to prevent damage to the walls and cause sloughing. Place and tie or clip symmetrically about the axis of the shaft. Use centering devices, securely attached to the cage, to clear the shaft walls and to maintain the cage in place throughout the concrete placement.

C. Set reinforcing steel at required location and elevation prior to concrete placement. Hold and support steel such that it does not move during concrete placement.

D. Check the elevation of top reinforcing steel before and after concrete placement. Make adjustments if steel cage position is not maintained.

E. Check depth of hole using a weighted tape before and after placement of the reinforcing steel. If more than 1 inch to the bottom of the hole is lost, remove cage and remove slough at bottom of hole.

3.05 CONCRETE PLACEMENT

A. Place concrete in dry excavations whenever practicable. Use all practicable means to obtain a dry excavation before and during concrete placement.

B. Concrete shall be placed as soon as possible after reinforcing steel installation. Concrete placement shall be continuous from the bottom to the top elevation of the shaft. Concrete placement shall continue until good quality is evident at the top of the shaft. Concrete shall be placed with a tremie pipe connected to a concrete boom truck.

C. Infiltration of groundwater at or near the bottom of the hole exceeding 1/4 inch rise per minute will be considered a wet placement.

D. Wet Concrete Placement

1. Fill hole with water or slurry to the natural water level to equalize the hydraulic head inside and outside the shaft excavation before starting concrete placement. Use only concrete mix designed for tremie placement.

2. Tremie shall be constructed such that it is watertight and will readily discharge concrete. The tremie shall be of sufficient length to permit the discharge end to be immersed in concrete at all times.

3. A plug or similar device shall be used to separate the concrete from the fluid in the hole until pumping begins. Once concrete placement begins, the tip of the tremie pipe shall be maintained to prevent reentry of the slurry into the pipe.

4. Flow of concrete shall be continuous and concrete in tremie shall have sufficient capacity to maintain a positive pressure differential at all times to prevent water or slurry intrusion into the shaft concrete.

3.06 WITHDRAWAL OF TEMPORARY STEEL CASING

A. Where temporary steel casings are used to support the excavation walls, withdraw the casing as the concrete is being placed, unless otherwise indicated or unless the Engineer requires that the casing be permanently grouted in place. Remove the steel casing in such a manner so that the lower edge of the steel liner will always remain a minimum of 5 feet below the surface of the concrete as placed to prevent water from entering the casing from the bottom. Vibrate concrete during withdrawal of the steel casing.

3.07 FIELD QUALITY CONTROL

A. For large diameter drilled shafts (3 feet or larger in diameter) and for all drilled shafts or CIDH piles/piers encountering ground water, the Contractor is required to perform ASTM D6760, Ultrasonic Crosshole Testing to confirm the homogeneity and integrity of all of the drilled shafts and CIDH piers/piles. If any of the tested shaft or CIDH pile/pier fails to

meet the testing requirements, the Contractor has to remedy the defects and to submit a plan to the Engineer for approval before proceeding, at no additional cost

B. Records and Reports: Keep a record, on an approved form, for each drilled shaft foundation installed. Record on the form the location, dimensions, elevations of top and bottom, depth of stratum penetration, condition of bottom of excavation, concrete placement data, a continuous record of actual concrete volume placed versus theoretical volume, and any other data called for on the approved report form or pertinent to the foundation.

SECTION 02775

CONCRETE CURB, GUTTERS, AND SIDEWALKS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Furnish all labor, materials, methods or processes, implements, tools, machinery and equipment required to remove and replace existing concrete curb and gutter, sidewalks and driveways as required and as specified herein.

1.02 REFERENCE SPECIFICATIONS

A. Wherever the words "Standard Specifications" are referred to, the reference is to the State of California, Department of Transportation, Standard Specifications – 2010.

1.03 SUBMITTALS

A. Submit certificate of compliance indicating that the concrete complies with the specifications as submittals.

1.04 QUALITY ASSURANCE

A. Removal of Existing Concrete:

1. The Contractor shall not remove more concrete than can be replaced within the week that work has begun. All sidewalks, etc., shall be in place with barricades removed and ready for public traffic by 5:00 p.m., Friday, of any working week. No sidewalks, etc., shall be left open over weekends or holidays, except with the Engineer's permission. All forms shall be stripped and driveways shall be opened by the above times.

2. Existing concrete curb, gutters, sidewalks and driveways shall be saw cut and then broken out to a straight joint as directed by the Engineer. The Contractor shall exercise care in removing the concrete so as not to damage adjoining areas which are to remain in place, and any damage so caused shall be repaired by the Contractor at his own expense.

3. The Contractor shall exercise care so as not to injure any tree. If encounter any tree roots more than 2” in diameter, the Contractor shall inform the City Arborist for inspection. Concrete directly adjacent to tree trunks or large roots shall be carefully removed so that the bark of the tree is not damaged.

4. The Contractor shall remove and dispose of all excess material or debris off the job site by the end of each workday. The existing concrete to be removed shall

be outlined by the scoring with a concrete saw to a uniform depth of not less than four inches (4") to provide a break joint where a joint does not already exist.

5. All sod or turf removed in order to place forms shall either be removed in such a manner as to enable the Contractor to put it back into place in its original condition after stripping forms or replaced with backfill and seeded. In the event the turf is non-existent or in so poor condition that it cannot be replaced, the area concerned will be brought back to grade and compacted to 80% density with good quality top soil to conform with the surrounding area.

1.05 ADDITIONAL SAFETY RESPONSIBILITIES

A. Contractor shall be responsible for safety of the public, especially in sidewalk areas, during this project. Work sites shall be kept safe by placing adequate barricades, wood walks in commercial areas, eliminating tripping hazards, and other means as appropriate. Open excavation shall be covered when no work is being performed. Steel plating shall be installed until temporary surfacing can be constructed.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Portland Cement Concrete:
All concrete shall consist of 5-sacks of Portland Cement per cubic yard of concrete and have a 28-day compressive strength of 2500 psi. Aggregate shall conform to combined aggregate sizes designated as 3/4" maximum. The concrete shall have a slump not to exceed three inches (3") as determined by the conventional slump cone method. It is the Contractor's responsibility to protect the concrete finish until acceptance by the Engineer. The color and finish shall be as close as possible to that of the surrounding pavement, with preference to a light broom finish and darkened with one (1) pound dry lampblack conforming to ASTM D209 per cubic yard concrete. Concrete shall be scored to conform to the existing pattern. No concrete shall be poured until forms have been inspected and approved by the Engineer.

B. If necessary, concrete sidewalk, curb & gutter shall be replaced in accordance with project drawings and standard details, City of Burlingame.

PART 3 – EXECUTION

3.01 INSTALLATION

A. Forms shall be smooth on the side placed next to the concrete and shall have a true smooth upper edge and shall be rigid enough to withstand the pressure of fresh concrete without distortion. All forms shall be thoroughly cleaned and coated with form oil to prevent the concrete from adhering to them. The depth of forms shall be equal to the full depth of the concrete section being poured. Contractor shall exercise

care not to injure any part of the tree in placing his forms. No cutting away of any part of the trunk or main roots to accommodate forms will be permitted. Forms shall be bent around tree trunks to provide a minimum of two inches (2") clearance for the finished sidewalk.

B. Control joints shall be placed as required or as herein specified. Control joints shall be 1 ½" deep and shall be constructed with a special tool design for such joints. At least a control joint shall be placed in each pour of concrete over 10 feet in length and at 10-foot intervals thereafter.

A control joint shall be placed on each side of the tree, at a distance of no more than five feet (5') either side of the tree. No additional compensation will be allowed for placing of control joints.

C. Adjust structures such as valve boxes, manhole frames and covers, and electrical vaults to grade after the curb and gutter or sidewalk has been constructed for a reasonable distance on all sides of the structure.

3.02 CURING

A. All concrete shall be cured as provided in Section 90-1.03B, "Curing Concrete," of the Standard Specifications for a period of 72 hours. The Contractor shall have the option of using the Water Method, the Curing Compound Method or the Waterproof Membrane Method as described in Section 90-1.03B(2), 90-1.03B(3) or 90-1.03B(4), respectively. No vehicular traffic shall be allowed on new concrete in less than 48 hours after it is poured.

3.03 CLEANUP

A. After removal of forms, the adjacent area shall be backfilled and graded to conform to the surrounding ground. Each site shall be left neat and orderly. All turf or sod shall be both replaced in its original condition or backfilled and seeded. In the event the turf is non-existent or in so poor condition that it cannot be replaced, the area concerned will be brought back to grade and compacted to 80% density with good quality topsoil. Surrounding area, other than landscaping, shall be restored in kind.

B. All work areas shall be left clean, neat and orderly with all concrete in place for the week's work by 5:00 p.m., Friday. Whenever work areas are not left clean, neat and orderly, the City shall perform all necessary cleanup at the Contractor's expense and a deduction shall be made for such work on the next progress payment.

END OF SECTION

SECTION 03200

REINFORCEMENT STEEL

PART 1 - GENERAL

1.01 WORK OF THIS SECTION

A. The Contractor shall provide concrete reinforcement steel, concrete inserts, wires, clips, supports, chairs, spacers, and other accessories, complete, all in accordance with contract documents.

B. Work included in this section: Principal items are:

1. Furnishing and placing bar reinforcing for cast-in-place concrete.

1.02 RELATED SECTIONS

A. The work of the following sections apply to the work of this section. Other sections, not referenced below, shall also apply to the extent required for proper performance of this work.

1. Section 03300 Cast-in-Place Concrete

B. Except as otherwise indicated in this section of the specifications, the Contractor shall comply with the latest adopted edition of the Standard Specifications for Public Work Construction (SSPWC), together with the latest adopted editions of the Regional Amendments.

C. The latest edition of the California Building Code (CBC).

D. Commercial Standards (Current Edition):

ACI 315	Details and Detailing of Concrete Reinforcement
ACI 318	Building Code Requirements for Structural Concrete
CRSI MSP	Concrete Reinforcing Steel Institute Manual of Standard Practice
AWS D1.4	Structural Welding Code – Reinforcing Steel
ACI 117	Standard Tolerances for Concrete Construction Materials

E. ASTM Standards in Building Codes (Current Edition):

ASTM A615	Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement
ASTM A706	Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A1060	Specification for Zinc-Coated (Galvanized) Steel Welded Wire Reinforcement, Plan and Deformed for Concrete

1.03 CONTRACTOR SUBMITTALS

A. The Contractor shall furnish shop bending diagrams, placing lists, and drawings of all reinforcement steel before fabrication.

B. Details of the concrete reinforcement steel and concrete inserts shall be submitted at the earliest possible date after receipt of the Notice to Proceed. Details of reinforcement steel for fabrication and erection shall conform to ACI 315 and the requirements indicated. The shop bending diagrams shall show the actual lengths of bars, to the nearest inch, measured to the intersection of the extensions (tangents for bars of circular cross section) of the outside surface. The shop drawings shall include bar placement diagrams which clearly indicate the dimensions of each bar splice.

C. If reinforcement steel is spliced by welding at any location, the Contractor shall submit mill test reports which shall include the information necessary for the determination of the carbon equivalent as specified in AWS D1.4. The Contractor shall submit a written welding procedure for each type of weld for each size of bar which is to be spliced by welding; a mere statement that AWS procedures will be followed will not be acceptable.

1.04 QUALITY ASSURANCE

A. If requested by the Engineer, the Contractor shall furnish samples from each heat of reinforcement steel delivered in a quantity adequate for testing. Costs of initial tests will be paid by the Agency. Costs of additional tests due to material failing initial tests shall be paid by the Contractor.

B. If reinforcement steel is spliced by welding at any location, the Contractor shall submit certifications of procedure qualifications for each welding procedure used and certification of welder qualifications, for each welding procedure, and for each welder performing the work. Such qualifications shall be as specified in AWS D1.4.

C. If requested by the Engineer, the Contractor shall furnish samples of each type of welded splice used in the Work in a quantity, and of dimensions, adequate for testing. At the discretion of the Agency, radiographic testing of direct butt welded splices will be performed. The Contractor shall repair any weld which fails to meet the requirements of AWS D1.4. The costs of testing will be paid by the Agency; except, the costs of all tests which fail to meet specified requirements shall be paid by the Contractor at no increase in cost to the Agency.

PART 2 - PRODUCTS

2.01 MATERIAL REQUIREMENTS

A. Materials which may remain or leave residues on or within the concrete shall be classified as acceptable for potable water use by the Environmental Protection Agency within 30 days of application or use.

2.02 REINFORCEMENT STEEL

A. Reinforcement steel for all cast-in-place reinforced concrete construction shall conform to the following requirements:

1. Bar reinforcement shall conform to the requirements of ASTM A615 for Grade 60 Billet Steel Reinforcement or as otherwise indicated.
2. All welded reinforcement (unless otherwise indicated), specifically detailed or otherwise indicated shall be low-alloy grade 60 deformed bars conforming to the requirements of ASTM A706.
3. Welded wire fabric shall conform to ASTM A1060.
4. Ties shall be Annealed Steel, 14 gauge minimum.

B. Accessories:

1. Accessories shall include all necessary chairs, slab bolsters, concrete blocks, tie wires, dips, supports, spacers, and other devices to position reinforcement during concrete placement. All bar supports shall meet the requirements of the CRSI Manual of Standard Practice, including special requirements for supporting epoxy coated reinforcing bars. Wire bar supports shall be CRSI Class 1 for maximum protection with a 1/8-inch minimum thickness of plastic coating which extends at least 1/2-inch from the concrete surface. Plastic shall be gray in color.
2. Concrete blocks (dobies), used to support and position reinforcement steel, shall have the same or higher compressive strength as specified for the concrete in which it is located. Wire ties shall be embedded in concrete block bar supports.

2.03 WELDED SPLICES

A. Welded splices shall be provided where indicated and where approved by the Engineer. All welded splices of reinforcement steel shall develop a tensile strength which exceeds 125 percent of the yield strength of the reinforcement bars which are connected.

B. All materials required to conform the welded splices to the requirements of AWS D1.4 shall be provided.

2.04 EPOXY GROUT

A. Epoxy for grouting reinforcing bars shall be specifically formulated for such application, for the moisture condition, application temperature, and orientation of the hole to be filled.

PART 3 - EXECUTION

3.01 GENERAL

A. All reinforcement steel and other appurtenances shall be fabricated, and placed in accordance with the requirements of the California Building Code and the supplementary requirements indicated herein.

3.02 FABRICATION AND DELIVERY

A. The Contractor shall conform to CRSI MSP except as otherwise indicated or specified. The Contractor shall bundle reinforcement and tag with suitable indication to facilitate sorting and

placing, and transport and store at site so as not to damage material. The Contractor shall keep a sufficient supply of tested, approved and proper reinforcement at site to avoid delays.

B. Bending and Forming: The Contractor shall bend bars of indicated size and accurately form in accordance with the requirements of ACI 315 and ACI 318 to shapes and lengths indicated on drawings and required by methods not injurious to materials. The Contractor shall not use heat for bending reinforcement. Bars with kinks or bends not scheduled will be rejected.

C. Fabricating Tolerance: All fabrication of reinforcing bars shall meet the requirements of ACI 117.

3.03 PLACING

A. Reinforcement steel shall be accurately positioned and shall be supported and wired together to prevent displacement, using annealed iron wire ties or suitable clips at intersections. All reinforcement steel shall be supported by concrete, plastic or metal supports, spacers or metal hangers which are strong and rigid enough to prevent any displacement of the reinforcement steel. Where concrete is to be placed on the ground, supporting concrete blocks (or dobies) shall be used, in sufficient numbers to support the bars without settlement, but in no case shall such support be continuous. All concrete blocks used to support reinforcement steel shall be tied to the steel with wire ties which are embedded in the blocks. For concrete over formwork, the Contractor shall furnish acceptable bar chairs and spacers.

B. Limitations on the use of the bar support materials shall be as follows:

1. Concrete Dobies: Permitted at all locations except where architectural finish is required.
2. Wire Bar Supports: Permitted only at slabs over dry areas, interior dry wall surfaces and exterior wall surfaces.
3. Plastic Bar Supports: Permitted at all locations except on grade.

C. Tie wires shall be bent away from the forms in order to provide the specified concrete coverage.

D. Bars additional to those shown which may be found necessary or desirable by the Contractor for the purpose of securing reinforcement in position shall be provided by the Contractor at no additional cost to the Agency.

E. Unless otherwise specified, reinforcement placing tolerance shall be within the limits specified in ACI 318 except where in conflict with the requirements of the CBC.

F. Bars may be moved as necessary to avoid interference with other reinforcement steel, conduits or embedded items. If bars are moved more than one bar diameter, or enough to exceed the above tolerances, the resulting arrangement of bars shall be subject to the approval of the Engineer.

3.04 SPLICES

A. Splicing shall be in accordance with ACI 318, unless otherwise noted on Drawings.

*** END OF SECTION ***

SECTION 03300

CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.01 WORK OF THIS SECTION

A. This section covers cast-in-place concrete including formwork.

1.02 RELATED WORK

A. Related work specified in other sections:

Section 03200 - Reinforcement Steel

1.03 REFERENCED SPECIFICATIONS, GUIDES AND RECOMMENDATIONS

A. The latest edition of the following publications, form a part of this specification to the extent indicated by the references thereto.

B. American Society for Testing and Materials (ASTM):

1. C31 Practice for Making and Curing Concrete Test Specimens in the Field.
2. C33 Test Method for Specification for Concrete Aggregates.
3. C39 Test Method for Compressive Strength of Cylindrical Concrete Specimens.
4. C40 Test Method for Organic Impurities in Fine Aggregates for Concrete.
5. C85 Test Method for Cement Content of Hardened Portland Cement Concrete.
6. C88 Test Method for Soundness of Aggregates by use of Sodium Sulfate or Magnesium Sulfate.
7. C94 Specification for Ready-Mixed Concrete.
8. C131 Test Method for Resistance to Degradation of Small Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.
9. C136 Method for Sieve Analysis of Fine and Coarse Aggregates.
10. C143 Test Method for Slump of Hydraulic Cement Concrete.
11. C150 Specification for Portland Cement.
12. C156 Test Method for Water Retention by Concrete Curing Materials.

13. C173 Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.

14. C231 Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.

15. C233 Test Method for Air-Entraining Admixtures for Concrete.

16. C260 Specification for Air-Entraining Admixtures for Concrete.

17. C289 Test Method for Potential Alkali-Silica Reactivity of Aggregates (Chemical Method).

18. C441 Test Method for Effectiveness of Pozzolans or Ground Blast-Furnace Slag in Preventing Excessive Expansion of Concrete Due to the Alkali-Silica Reaction.

19. C457 Test Method for Microscopical Determination of Air-Void Content and Parameters of the Air-Void System in Hardened Concrete.

20. C494 Specification for Chemical Admixtures for Concrete.

21. C670 Standard Practice for Preparing Precision and Bias Statements for Test Methods for Construction Materials.

22. C683 Method of Test for Compressive and Flexural Strength of Concrete Under Field Conditions.

23. C803 Test Method for Penetration Resistance of Hardened Concrete.

C. American Concrete Institute (ACI):

1. 301 Specifications for Structural Concrete (as supplemented and modified herein)

2. 211.1 Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete.

3. 304R Guide for Measuring, Mixing, Transporting, and Placing Concrete.

4. 318 Building Code Requirements for Structural Concrete and Commentary.

D. California Building Code (CBC)

1.04 SUBMITTALS

A. The following shall be submitted:

1. The Shop Drawings shall show complete details and arrangement of reinforcing steel and embedded items.

2. A sufficient quantity of the proposed aggregate, sand, air-entraining admixtures, cement and water (if other than Agency furnished water) for testing of materials and concrete

mix designs referred to under Sub-Section 1.05 below.

3. Certification of aggregate compliance with these contract documents, and source of supply and location of all materials and cement.

4. Mix design for each concrete mixture. Mix Designs shall be prepared by a qualified independent testing agency based on laboratory trial mixes.

5. Material certificates for all admixtures and additives signed by the manufacturer's representative.

6. Curing compounds material certificates signed by the manufacturer's representative.

7. Material samples and certificates.

8. Forming:

   a. Forming and bracing designs shall be designed by the Contractor to meet all requirements specified herein.

   b. If requested by the Engineer, drawings and calculations shall be submitted verifying the selection of form ties, horizontal and vertical stiffbacks or braces for forms, form openings, or any other part of forming or bracing which may be considered critical by the Contractor.

   c. The Contractor shall be solely responsible for the adequacy of the forming and bracing design.

   d. The turn-around time of the Contractor's review or approval, or disapproval, will be 2 weeks from date of receipt of each written submittal.

   e. Any formwork installed by Contractor shall be solely at Contractor's risk. The Engineer's review or approval will not lessen or diminish the Contractor's liability.

1.05 CONCRETE MIX DESIGNS

A. All concrete materials shall be proportioned so as to produce a workable mixture in which the water content will not exceed the maximum specified.

B. If the concrete mix designs specified herein have not been used previously by the readymix supplier or if directed by the Engineer, mix proportions and concrete strength curves for regular cylinder tests, based on the relationship of 7, 14 and 28 day strengths versus slump values of 2, 4 and 6 inches, all conforming to these Specifications, shall be established by an independent testing laboratory. A laboratory, independent of the readymix supplier, shall be required to prepare and test all concrete cylinders.

The costs for preparation of mix designs and testing of concrete and materials shall be borne by the Contractor.

C. The exact proportions by weight of all materials entering into the concrete delivered to the jobsite shall conform to the approved mix design unless specifically so directed by the Engineer or Laboratory for improved specified strength or desired density, uniformity and workability.

D. The proportions of such mix design shall be based on a full cubic yard of hardened concrete.

E. Ready mix companies or jobsite batch plants shall furnish delivery tickets, signed by a Certified Weigh-Master, on which each shall state the weight of coarse and fine aggregates, cement, admixtures and water and the number of cubic yards of concrete furnished, which will be compared against the approved mix design.

F. There shall be no variation in the weights and proportions of materials from the approved mix design.

G. There shall be no variation in the quality and source of materials once they have been approved for the specific mix design.

1.06 READY MIXED CONCRETE

A. Ready mixed concrete shall conform to the requirements of ACI 301 and ASTM C94. In case of conflict, ACI 301 shall govern.

PART 2 - PRODUCTS

2.01 CONCRETE COMPOSITION

A. Concrete shall be composed of portland cement, fine aggregate, coarse aggregate, water, and specified additives so proportioned and mixed as to produce a plastic workable mixture in accordance with requirements of this section of the specifications and suitable to the specific conditions of placement.

2.02 PORTLAND CEMENT

A. Portland cement shall be from an approved source and shall conform to the requirements of the current ASTM Specification C150, for Type II cement. Only one brand of cement from one manufacturing plant may be used.

B. Cement may be delivered in paper sacks or in bulk.

C. If cement is delivered in sacks, each sack shall contain not less than 94 pounds of cement, and if delivered in bulk, one barrel of cement shall be considered to weigh 376 pounds.

D. In order that the cement may not become unduly aged after delivery, the Contractor shall use cement that has been stored on the jobsite before using cement direct from freighting, hauling or transporting operations.

E. Storage bins for bulk cement shall be watertight and constructed so that there will be no dead storage.

F. If there is reason to believe that dead storage exists, the bins shall be emptied completely at least once every four months.

G. Cement bins at the mixing plant, and cement storage silos shall be provided with effective dust collectors at the vents to prevent loss of cement.

H. The Contractor shall designate the source and quantity of cement required for his needs at least 30 days prior to its use, so that appropriate tests, inspection and certification can be made.

I. Certified mill certificates shall be furnished by the cement company with every shipment, giving proof that the above requirements have been met.

J. In addition, the Agency may conduct, at its own expense, any tests it considers necessary, to ensure that the cement furnished meets the specified requirements.

K. Any cement not meeting the Specifications will be rejected.

L. The Engineer may direct the use of portland cement of a type other than that above specified, in which case the City will pay the additional cost, if any, for the cement required over the cost of that specified, or shall receive appropriate credit for any cement required of a lesser cost than specified.

2.03 FINE AND COARSE AGGREGATES

A. Fine aggregate shall be clean, natural sand consisting of hard, strong, durable and uncoated particles.

B. Material removable by decantation from fine aggregate shall not exceed five percent (5%) by weight.

C. The moisture content of fine aggregate shall be carefully monitored by the use of moisture probes, placed at varying depths, which indicate the moisture content at the time the aggregate is used for the concrete.

D. Fine aggregate shall be subjected to careful, thorough analysis to determine conformity with all requirements of these specifications.

E. Mortar specimens made with the fine aggregate shall have a compressive strength after seven (7) days of at least ninety percent (90%) of the strength of similar specimens made with Ottawa sand having a fineness modulus of 2.40 ± 0.10.

F. Coarse aggregate shall be washed gravel or crushed stone consisting of hard, tough, durable particles free from adherent coating.

G. It shall contain no vegetable matter of soft, friable, thin, flat or elongated particles in quantities considered deleterious.

H. A thin, flat or elongated particle is defined as a particle having a maximum dimension in excess of five times its minimum dimension.

I. Aggregate which has disintegrated or weathered badly under exposure conditions similar to those which will be encountered in the work under consideration shall not be used.

J. When crushed stone is used, the crusher shall be equipped with a screening system which will entirely separate the dust from the stone and convey it to a separate bin.

K. The substances designated shall not be present in excess of the following amounts:

1. Soft fragments: 5%
2. Clay lumps: 1.4%
3. Material removed by decantation: 1%

L. When the material removed by decantation consists essentially of crushed dirt, the maximum amount permitted may be raised to one and one-half percent (1-1/2%).

M. Coarse aggregate shall be subjected to a careful, thorough analysis to determine conformity with all requirements of these Specifications.

N. The maximum size aggregate shall be 1 inch and the aggregate shall be uniformly well graded from coarse through fine.

O. Corrective measures to remedy deficiencies in aggregate grading may be used only with the written approval of the Engineer.

P. The Contractor shall furnish satisfactory evidence to the Engineer that all aggregate used in the work meets the requirements specified herein. Tests shall be performed by a reputable independent testing laboratory and the cost of testing be borne by the Contractor.

Q. If the Engineer deems that additional testing of aggregate is necessary, he may select samples from any of the aggregate delivered to the ready-mix plant or jobsite and have them tested by a laboratory of his choice. Such material shall not be used in the work until test reports are available. If in such tests the material fails to meet the specified requirements, the aggregate will be rejected and the expense of testing shall be borne by the Contractor. If such tests show the aggregate to be satisfactory, the cost of additional testing will be paid by the Agency but the Contractor shall have no claim for costs due to delays caused by testing.

R. When tested in accordance with "Organic Impurities in Fine Aggregates for Concrete" (ASTM C40), the fine aggregate shall provide a color in the supernatant liquid no darker than the reference standard color solution.

S. When tested in accordance with "Soundness of Aggregates by use of Sodium Sulfate or Magnesium Sulfate" (ASTM C88), the loss resulting after five cycles shall not exceed 10% for fine aggregate and 12% for coarse aggregate when using sodium sulfate.

T. When tested in accordance with "Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impaction in the Los Angeles Machine" (ASTM C131), the coarse aggregate shall show a loss not exceeding 50% after 500 revolutions or 10% after 100 revolutions.

U. When tested in accordance with "Potential Alkali-Silica Reactivity of Aggregates (Chemical

Method)" (ASTM C289), the aggregates should be represented by points lying to the left side of the solid line of Figure 2.

2.04 WATER

A. Water for mixing shall be clean, fresh and free from injurious amounts of oil, acid, chlorides, sulfates, alkali or organic matter. Water shall conform to ACI 301.

2.05 ADMIXTURES - GENERAL

A. All admixtures used in any mix design shall be manufactured and supplied by the same admixture company to insure compatibility.

2.06 RETARDING DENSIFIERS

A. Any product offered for consideration shall contain no calcium chloride, and shall be compatible with air-entrained cements and air-entraining admixtures conforming to the applicable ASTM, AASHTO, ANSI and Federal specifications.

B. Contractor shall certify that admixtures do not contain calcium chlorides or other corrosive materials.

2.07 AIR-ENTRAINING AGENTS

A. Air-entraining admixtures shall conform to ASTM C260.

2.08 WATER REDUCING ADMIXTURES

A. In addition to air-entrainment, approved water reducing additives, which do not affect the ultimate performance of any steel in any way, may be added to maintain the maximum water content below that specified herein. Water reducing additives shall conform to ASTM C494, Type A or D.

B. The use of water reducing additives shall not permit a reduction in the minimum specified cement content or in the specified amount of air-entrainment.

C. Admixtures shall contain no calcium chloride or tri-ethanolamine. All admixtures shall be from the same manufacturer.

D. Super-plasticizers shall conform to ASTM C494, Type F or G, batch plant-added using second or third generation only.

2.09 PROPORTIONING NORMAL CONCRETE

A. Unless indicated otherwise on the contract drawings, concrete shall meet the mix and compressive strength requirements as specified hereafter.

2.10 MEASUREMENT

A. All measurements shall be by weight. However, Contractor, at his own expense, may increase

the cement content at a corresponding reduction in weight of aggregates, whenever he is concerned that the minimum strength and mix ratio requirements under these specifications cannot be met. The amount of water to be used shall be the amount necessary to produce a plastic mixture of the specified slump.

B. The slump shall be between two inches and four inches when tested in accordance with ASTM C143. Variations in the slump range may be allowed by the Contractor if admixtures, such as water reducers or super-plasticizers, are utilized in the concrete mix. Regardless of the measured slump, the maximum allowable water-cement ratios as specified here-in, shall be strictly adhered to.

2.11 COMPRESSIVE STRENGTH, WATER AND CEMENT CONTENT

A. Notwithstanding what has been stated herein-before, and unless shown otherwise on the contract drawings, the concrete shall meet the following requirements:

1. Minimum Compressive Strength 4,000 psi

2. Maximum Water Content
(gallons per 94 lb. sack of cement) 4.75 gallons

3. Minimum Cement Content
(94 lb. sack of cement per
cubic yard of solid concrete) 6.0 sacks

B. The cement content is required irrespective of strength.

C. The total chloride ion content of hardened concrete shall be less than 0.06 percent by weight of cement.

2.12 WALL FOOTING FORMS

A. Full Height Pours: The wall footing form design shall be such that wall footing sections can be poured without creating horizontal cold joints and without causing snapping of form ties (if used) which shall be of sufficient strength and number to prevent spreading of the forms during the placement of concrete and which shall permit ready removal of the forms without spalling or damaging the concrete.

B. Ties (if used):

1. Snap ties, if used, shall not be broken until the concrete has reached the design concrete strength. Snap ties, designed so that the ends must be broken off before the forms can be removed, shall not be used. The use of tie wires as form ties will not be permitted. Fully threaded stub bolts may be used in lieu of smooth ties with waterstops.

2. Taper ties with plastic or rubber plugs of an approved and proven design may also be used. The plugs must be driven into the hole with a steel rod, placed in a cylindrical recess made therefore in the plug. At no time shall plugs be driven on the flat area outside the cylindrical recess. Plugs shall be A58 SURE PLUG as manufactured by DAYTON

SUPERIOR, Santa Fe Springs, CA (phone: (714) 522-3442).

3. Ties or other approved methods of holding the outside wall footing form shall positively secure the wall to the required dimension and hold the wall footing to that dimension prior to and during concrete placement.

2.13 CURING COMPOUND

A. All horizontal, screeded and floated surfaces, exposed to drying winds and sunlight, shall be sprayed with AMERICAN 309 ACRYLIC SEALER as manufactured by American Concrete Systems, Inc., San Diego, CA 92126, (application rate: 200 sf/gallon), or SELECT CURE SEAL AC-309 as manufactured by Select Products Company, Upland, CA, (application rate: 200 sf/gallon), and subsequently covered with a 6 mil thick polyethylene sheet.

B. Alternate curing compounds will be accepted if it is pigmented or colored, such as white, at the time of application and it is non-toxic to potable water. Regardless of the type of curing compound used, Contractor shall assume complete responsibility for its adequacy.

PART 3 - EXECUTION

3.01 CONCRETE QUALITY

A. Concrete shall conform to the requirements of Sub-Section 2.01 above. The required proportions shall be assembled, well mixed, transported, placed, consolidated, finished and cured as herein-after specified. Concrete shall be uniformly dense and sound, free from faults, cracks, voids, honeycomb and other imperfections.

B. If not called for specifically and unless specified otherwise hereunder, concrete requirements shall follow ACI 301 where applicable.

3.02 MIXING

A. Concrete shall be batched in fully automatic or semi-automatic stationary plants or approved portable batch type plants, and mixed in stationary or truck mixers. Mixing equipment and mixing procedures shall be subject to the approval of the Engineer.

B. Site-Mixed Concrete:

1. Conform to ACI 304R except as modified by these Specifications.

2. Use a batch-type mixer capable of combining the aggregates, cement, and water within the specified time into a thoroughly mixed and uniform mass and discharging the mixture without segregation.

3. Use supporting equipment that can accurately proportion the cement, the coarse and fine aggregates, the admixtures, and the water which enters the mixing drum. Proportion the cement and aggregate by weight.

4. Discharge each entire batch before recharging. Do not allow the volume of the mixed materials per batch to exceed the manufacturer's rated capacity of the mixer.

5. Mixing time shall be as follows:
   a. For mixer of capacity of 1 cubic yard or less, one and one-half minutes after batching is completed.

   b. For mixers of capacities larger than 1 cubic yard, one and one-half minutes plus one-half minute for each additional ½ cubic yard capacity or fraction thereof in excess of 1 cubic yard.

   c. The mixer shall revolve at a uniform rate as specified by the manufacturer for the mixing equipment.

C. Ready-Mixed Concrete:

1. Provide central-mixed concrete conforming to ASTM C94 except as modified by these Specifications.

2. Limit the haul time of central-mixed concrete so that the specified slump is attained without the onsite addition of water which will cause the mix design water-cement ratio to be exceeded. In no event shall the time exceed 90 minutes from the batch plant to the completion of the pour, unless specifically approved by the Engineer.

3. Use truck-transported, dry-batched concrete or mix on the jobsite when haul time is excessive. Do not re-temper partially hardened concrete.

3.03 PROTECTION FROM ABRASION OR FIRE

A. Every reasonable precaution shall be taken to protect finished surfaces from abrasions or other damage. Concrete surfaces or edges likely to be injured during the construction period shall be protected by leaving the forms in place or by erecting satisfactory covers. No fire shall be permitted in direct contact with concrete at any time.

3.04 PLACEMENT OF CONCRETE

A. Placement shall conform to ACI 304R except as modified by these Specifications.

B. Notify the Engineer of readiness, not just intention, to place concrete in any portion of the work. This notification shall be such time in advance of the operation as the Engineer deems necessary to observe the preparations at the location of the proposed concrete placing. All forms, steel, anchors, ties, inserts, and other embedded items shall be in place before the Contractor's notification of readiness is given to the Engineer.

C. Schedule sufficient equipment for continuous concrete placing, program backup equipment, and the actions to be taken in case of an interruption in placing. Provide extra concrete vibrators. Test the concrete vibrators the day before placing concrete.

D. Concrete shall not be placed in layers thicker than can be properly vibrated and consolidated at any one time.

E. Each layer of concrete shall be vibrated thoroughly before the next layer may be placed thereon. Vibrators shall be taken through the top layer down through the full layer thickness below to ensure proper integration of the concrete and to avoid the development of cold joints and honeycomb between the layers. In other words, each layer of concrete shall be vibrated at least twice.

F. Each initial wall pour (where occurs) shall be preceded with a grout layer as indicated on the contract drawings.

G. Unforeseen horizontal cold joints shall be roughened and then covered with a pure mixture of cement and water of approximately 1-inch thickness, before the pour may be continued.

H. Horizontal waterstops, if shown on the contract drawings, shall be lifted up, then the concrete shall be placed under the waterstop, the waterstop shall then be laid down on that concrete, additional concrete shall be placed on top of that waterstop to the approximate finish level of the concrete, whereupon the concrete shall be thoroughly vibrated in one continuous motion from one end of the waterstop to the other end without skipping any areas. Visual observation shall be performed by the Contractor to certify that voids under waterstops do not exist.

I. Cold joints in footings shall be avoided at all costs. Joints shall be continuously covered with new concrete, and shall be thoroughly integrated through vibration, even if it means that horizontal passes of only 6 inches in width be made until additional concrete and equipment becomes available to permit wider passes in concrete placement.

J. The following minimum equipment, which must be in excellent working condition, shall be available on the site for every concrete placement:

1. Vibrating: 3 vibrators of 14,000 vibrations per minute (minimum).

The Contractor shall be the sole judge as to the acceptability of the equipment as to its condition and capacity. The Contractor shall assume complete responsibility for having adequate equipment.

K. Use mechanical vibration in placing concrete to eliminate rock pockets and voids, to consolidate each layer with that previously placed, to completely embed reinforcing bars and fixtures, and to bring just enough fine material to exposed surfaces to produce a smooth, dense, and even texture. Vibrators shall be of the high-frequency internal type, and the number in use shall be ample to consolidate the incoming concrete to a proper degree within 15 minutes after it is deposited in the forms. In all cases, at least three (3) operable vibrators shall be available at the site. Use external vibrators for consolidating concrete when the concrete is otherwise inaccessible for adequate consolidating, provided the forms are constructed rigidly enough to resist displacement or damage from external vibration.

L. At the intersection between a new wall footing and an existing wall footing, the existing wall footing shall be adequately roughened to ensure a good bond between the existing wall footing and the new wall footing where indicated on the contract drawings.

M. Do not place concrete during rainstorms. Protect concrete placed immediately before rain to prevent rainwater from coming in contact with it. Keep sufficient protective covering on hand

at all times for this purpose.

N. Concrete placed for encasement shall not be backfilled until the concrete has reached at least 50% of its 28-day compressive strength as confirmed by concrete cylinder tests. The Contractor may mold and cure additional concrete cylinders as specified here-in to verify that the 50% strength has been achieved, prior to the required 7-day test. The Contractor shall keep the trench dewatered until that time.

3.05 PUMPING CONCRETE

A. Base pump size on the rate of concrete placement, length of delivery pipe or hose, aggregate size, mix proportions, vertical lifts, and slump of concrete. The minimum inside diameter of pipe or hose shall be based on the maximum aggregate size as follows:

- For 1-inch maximum Aggregate, use 3-inch minimum Hose inside diameter.

B. Do not use aluminum pipes for delivery of concrete to forms.

C. Before pumping is started, prime the delivery pipe or hose by pumping mortar through the line using 5 gallons of mortar for each 50 feet of delivery line. Do not deposit mortar in the forms.

3.06 GENERAL FORMING

A. Purpose:

1. Forms shall be used, whenever necessary, to confine the concrete, to shape the concrete to the required lines and grades, and to obtain a thoroughly compacted dense concrete through proper vibrating.

2. The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping and vibration, without deflection from the prescribed lines.

B. Design:

1. The surfaces of all forms in contact with the concrete shall be clean, rigid, tight and smooth.

2. Openings sufficient in size and number to permit convenient access to properly clean, inspect and place concrete within the forms shall be provided.

3. Exposed sharp edges shall be eliminated from finished concrete work by means of 3/4 inch triangular fillets or chamfer strips placed in the forms.

C. Removal:

1. All forms shall be removed before backfilling is placed.

2. Forms shall be so constructed that they can be removed without hammering on, or prying against the concrete and shall be removed in such a manner as to prevent damage to the

concrete and to ensure the complete safety of all parts of the structure.

D. Form-Ties and Seepage:

1. Form-ties may be loosened temporarily to permit the removal of bulkheads.

2. All forms, whether prefabricated or custom made, shall be assembled and connected in such a manner that only minor mortar seepage through the joints will occur during vibration of the concrete, which shall be small enough that no honeycomb areas will develop.

E. Clean and Oil:

1. All dirt, chips, sawdust, mud, water and other foreign matter shall be removed from within the forms or within the excavated areas, before any concrete is deposited therein.

2. Forms previously used shall be thoroughly cleaned of all dirt, mortar and foreign matter before being reused.

3. Before concrete is deposited within the forms, all inside surfaces of steel and plywood form surfaces shall be thoroughly, but not excessively, coated with an approved non-staining bond releasing form oil.

3.07 WALL FOOTING FORMS

A. All vertical wall footing sides shall be formed by methods acceptable to the Contractor and to the correct elevations and location shown on the contract drawings.

B. Block-outs: There shall be no block-outs or other types of openings other than those shown on the contract drawings.

C. Remove Wood Splinters:

1. Contractor shall remove all wood splinters on concrete surfaces after stripping of wood forms.

2. Such work shall be completed before abrasive blasting of exterior wall surfaces may be started.

D. Bulkheads:

1. Bulkheads to form vertical wall footing joints shall be strong enough to withstand concrete pressures during pouring and vibrating, and shall be properly placed between the forms to avoid mortar seepage.

2. Holes shall be provided in the bulkheads to permit passage of horizontal mild steel reinforcing where required by the contract drawings.

E. Form Removal:

1. Forms may be removed as soon as the concrete has developed sufficient strength to prevent sagging, excess deflection, misalignment, spalling, cracking, breaking of edges and surfaces and any other damage to the concrete. "Sufficient Strength" is defined as 70% of design compressive strength.

2. Removal of wall footing forms shall not be started any sooner than 12 hours of accumulated time with the ambient air temperature above 50° after completion of the pour.

F. Alignment and Tolerances:

1. Every precaution shall be taken to see that all forms are in the proper alignment, plumb, placed to correct radius and that all form supports are secure and tight.

2. Form sills shall be used to contain or hold down neoprene pads (if required) and facilitate proper alignment of forms. The maximum permissible variation in the horizontal and vertical location of the waterstops, neoprene pads and seismic cables (if required) is plus or minus 1/4 of an inch.

3. The out-of-round tolerance is: 3/4" in 50', 3/8" in 10' and 3/16" in 24" from the true curvature specified at any point on the wall footing.

4. The maximum permissible variation in the vertical alignment, from the bottom to the top of the wall footing, is plus or minus 3/8 of an inch.

5. All transitions from plus to minus shall be gradual, even and smooth, and without abrupt changes in the surfaces.

6. Adequate time and cooperation shall be provided to the Inspector to verify the compliance of these requirements prior to closing up the forms or pouring concrete.

3.08 SURFACE FINISHES

A. Wood Float Finish:

1. This requires an integral finish by wood float after screeding, to compact the surface evenly.

2. Any excess surface water shall be removed before floating and no mortar shall be used for leveling.

B. Steel Trowel Finish:

1. This shall be an integral finish obtained by trowelling with a steel trowel after the surface has been floated and allowed to stand until all water sheen has disappeared.

2. Final trowelling shall be done after the concrete has hardened sufficiently to prevent drawing moisture and fine materials to the surface and when the concrete is sufficiently hard that no mortar accumulates on the trowel.

3. Cement or mixture of cement and sand, shall not be spread on surfaces to absorb excess

water or to stiffen the concrete.

4. Trowelling shall produce a dense, smooth, impervious surface free from defects and blemishes.

5. All finished top surfaces of wall footing surfaces shall receive a smooth, even, level and hard (so called "burnt") steel trowel finish.

C. Unformed Surfaces: Unformed surfaces which will not be exposed in the completed work shall be brought to required finished elevations and left true and regular.

D. Screeds:

1. Sufficient screeds, unaffected by form deflections under concrete loads, shall be installed to insure an even concrete surface, true to grade and elevation, without unacceptable local depressions of any sort.

2. Screeds shall be set to the required levels and be approved by the Contractor before any concrete may be placed.

E. Form Tie Holes (if used):

1. Tie holes shall be thoroughly sandblasted or roughened. After the taper tie holes have been cleaned, plugs as specified in Sub-Section 2.12B2 shall be installed in the middle third of the wall footing. The tie holes shall then be coated with a water insensitive epoxy or an acceptable bonding agent and properly filled through damp-packing with a mortar of dry consistency and a mix of one part of cement to one part sand. The amount of water to be added to the cement-sand mix shall be such that the mortar can be driven into the voids and will compact properly. The outside of the tie hole shall be drypacked no sooner than 7 days after the inside has been drypacked.

2. Embeco or other fast-setting cements/additives shall not be used for damp-packing such cavities.

F. Abrasive Blasting:

The exterior surface of concrete wall areas, which will receive strand-wrapped prestressing/shotcrete, shall be abrasively blasted by a mechanical etching or shot blast system combined with a vacuum recovery system, or a self-contained waterblasting system.

1. The surface shall be blasted sufficiently to remove all laitance, form oil or other type coatings.

2. The surface shall be cut sufficiently to provide a good mechanical bond between the shotcrete covercoat and the concrete wall. The surface shall be cut to a minimum CSP5 profile, as established by the International Concrete Repair Institute (ICRI), over a minimum 90% of the area as measured over any one-foot-square area.

3. Systems that have not been used in the past to prepare circular tank wall surfaces for shotcreting and strand-wrapping or systems which rely on sandblasting or steel shot

without a vacuum system will not be allowed.

4. All abrasive blasting shall be done to the satisfaction of the Engineer.

G. Honeycombed areas:

1. Unless complete removal is required by the Engineer, defective surfaces, such as honeycomb, shall be cut out entirely until homogeneous concrete is exposed, even if it means going through the entire wall, slab or footing.

2. Such areas shall be coated with an approved epoxy or adhesive bonding material, which shall be applied in accordance with the manufacturer's instructions, before damp-packing the area with a mix consisting of one part of Portland cement and two parts of sand and fine gravel, epoxy and sand mix, or any combination of materials and mixes as the situation dictates in the opinion of the Engineer.

3. The water content of the damp-pack material shall be such that a ball of the mix may be squeezed in the hand without bringing free water to the surface.

4. Damp-pack material shall be tamped into place and finished to match adjacent concrete surfaces.

5. Particular care shall be taken that no sagging of the material will occur.

6. The bond between any two layers of damp-pack shall be improved through the use of an approved epoxy bonding agent.

7. Surfaces which have been damp-packed shall be kept continuously damp during, and for a period of not less than seven days after completing the damp-pack operation, by the curing procedure described below in Sub-Section 3.09.

8. Under no circumstances shall Contractor apply a plaster coat over the honeycomb areas to conceal the existence of the honeycomb in the concrete.

9. Neither Embeco, calcium chloride or fast-setting cements or additives shall be used for filling honeycomb areas, nor shall they be mixed with damp-pack material. Contractor shall provide certification that any material placed on or in the core wall shall be free of chlorides and other materials corrosive to reinforcing or prestressing steel.

H. Miscellaneous Surfaces: Miscellaneous surfaces that are not covered herein and not specifically designated on the contract drawings shall be finished as directed by the Engineer.

3.09 CURING

A. All horizontal, screeded and floated surfaces, exposed to drying winds and sunlight, shall be sprayed with a curing compound as specified in Sub-Section 2.13 of these specifications at an application rate of 200 sf per gallon. After the surface is dry to the touch, a 6 mil thick polyethylene sheet shall be carefully taped and sealed to the concrete surface and kept on such surface for as long as possible, but for at least 7 days, to minimize the loss of moisture trapped between the polyethylene and the concrete.

B. Water must be introduced between the polyethylene sheeting and the concrete (after the concrete has set) whenever moist drops cannot be detected on the concrete side of the sheeting. Water for curing shall be generally clean and free from any elements which might cause staining or discoloration of the concrete.

C. All formed concrete surfaces shall be sprayed with a concrete curing compound as specified in Sub-Section 2.13 of these specifications at an application rate of 200 sf per gallon. This requirement will be waived if the forms have been left in place for at least 7 days.

3.09 CONCRETE TESTS

A. Compression tests shall conform to ASTM C39, ASTM C670, ASTM C683 and ASTM C803.

B. Proportioning (or chemical analysis) tests shall conform to ASTM C85.

C. At least one slump test and five test cylinders shall be made, under the supervision of the Contractor, by an approved testing lab for every 40 cubic yards of ready-mixed concrete delivered to the jobsite. Each cylinder shall be coded to identify the date of delivery, the truck number, the location where the concrete has been used and the slump measured upon discharge. For each tank wall footing section, two sets of five cylinders shall be made, at the Contractor's option. This testing will be implemented by the Agency Representative as part of Special Inspection.

D. The specimens shall be standard test cylinders, six inches in diameter, twelve inches in length, and they shall be prepared in accordance with ASTM C31.

E. Molds for the standard test cylinders shall be furnished at the expense of the contractor.

F. Subject to the conditions outlined in Sub-Section 3.10(L), all costs for making and testing of concrete and materials, by a qualified independent testing laboratory, will be borne by the Agency.

G. Making and testing of cylinders shall be performed by an approved testing laboratory that normally engages in the preparation of concrete mix designs and testing of concrete materials.

H. A compression test may be made on one cylinder from each group of five after 7 and/or 14 days, at the Engineer's option. A strength test shall be made using two cylinders from each group of five at 28 days for use in evaluating the concrete strength in accordance with the current editions of the CBC and ACI 318.

I. If desired by the Engineer, proportioning tests for each class of concrete delivered to the jobsite shall be made from test cylinders designated by the Engineer.

J. In addition to the test cylinders referred to in Sub-Section 3.10(C), an additional 3 test cylinders shall be made for each day's pour.

They shall be cured in the same manner, and in the same location of the concrete area to be investigated.

K. The method of determining the standard deviation of compressive concrete strengths from previously utilized mix designs shall conform to Section 4 of ACI 301.

L. The compressive test results of the cylinders referred to in Sub-Section 3.10(H) above will be compared against the strength-versus-slump relationship curves referred to in Sub-Section 1.05(B) above. Proportioning tests may then be made, at the discretion of the Engineer, on those groups of cylinders which have shown low readings.

M. Any concrete not meeting the minimum specified design strength, and any concrete showing a cement content less than the ratio by weight established in the original mix design, will be subjected to further testing of concrete cores taken from the concrete in question. Should these tests confirm that the specified requirements have not been met, the extra costs involved in such testing shall be borne by Contractor; and the concrete, at the Contractor's option, and at Contractor's sole expense, may be rejected and must then be removed from the site or may be strengthened with additional shotcrete or concrete as the situation warrants it. Should the core tests indicate that the strength requirement has been met or if the low strength concrete is deemed acceptable to the Engineer, the extra costs involved in such testing shall still be borne by the Contractor.

N. A drying shrinkage test shall be conducted on the preliminary trial batch with the maximum water-cementitious materials ratio used to qualify each proposed concrete mix design using the concrete materials, including admixtures, that are proposed for the project. Three test specimens shall be prepared for each test. Drying shrinkage specimens shall be four-inch by four-inch by 11-inch prisms with an effective gauge length of ten-inches, fabricated, cured, dried, and measured in accordance with ASTM C157 except with the following modifications:

(1) Specimens shall be removed from the molds at an age of 23 hours plus/minus one hour after trial batching, shall be placed immediately in water at 73°F plus/minus 3°F for at least 30 minutes, and shall be measured within 30 minutes thereafter to determine original length and then submerged in lime-saturated water as specified in ASTM C157. Measurement to determine expansion expressed as a percentage of original length shall be taken at age seven calendar days. The length at seven calendar days shall be the base length for drying shrinkage calculations (“0” days drying age).

(2) Specimens then shall be stored immediately in a humidity controlled room maintained at 73°F plus/minus 3°F and 50 percent plus/minus 4 percent relative humidity for the remainder of the test. Measurements to determine shrinkage expressed as percentage of base length shall be reported separately for seven calendar days, 14 calendar days, and 21 calendar days plus/minus four hours of drying from “0” day after seven calendar days of moist curing.

(3) Drying shrinkage deformation for each specimen shall be computed as the difference between the base length (at “0” days drying age) and the length after drying at each test age. Results of the shrinkage test shall be reported to the nearest 0.001 percent. If drying shrinkage of any specimen deviates from the average for that test age by more than 0.004 percent, the results for that specimen shall be disregarded.

(4) The average drying shrinkage of each set of test specimens cast in the laboratory from a trial batch as measured at the 21 calendar days drying age or at 28 calendar days drying age

shall not exceed 0.036 percent or 0.042 percent respectively for concrete to be used in liquid-containing structures and 0.048 percent for concrete to be used in other structures. Drying shrinkage tests will not be required for any additional concrete mixes used for piles, pile caps, isolated footings, pipe blocking, pipe encasement, and duct banks. Maximum allowable shrinkage from field samples can be increased by 25 percent.

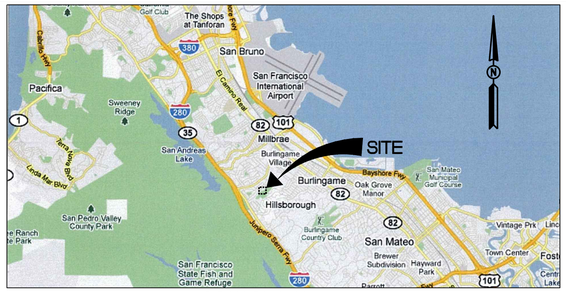
END OF SECTION

CITY OF BURLINGAME

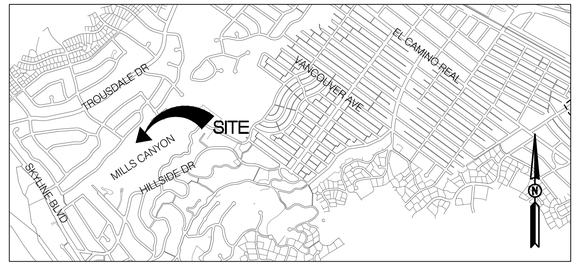
SAN MATEO COUNTY, CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR

CITY PROJECT No. 86780



LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

BENCHMARK/DATUM

BENCHMARK - PER THE SURVEY PROVIDED BY THE CITY TITLED "TOPOGRAPHIC SURVEY PLAN - PORTION OF MILLS CANYON PARK BEHIND 2839 ARGUELLO DRIVE" DATED 06/09/23 BY DAINS LAND SURVEYING.
DESCRIPTION - 1⅞" BRASS TAG & NAIL FOUND IN THE CITY MONUMENT LOCATED IN THE INTERSECTIONS OF ARGUELLO DRIVE AND SEBASTIAN DRIVE
ELEVATION - 428.46
VERTICAL DATUM - NAVD88
HORIZONTAL DATUM - NAD83; CALIFORNIA STATE PLANE COORDINATE SYSTEM, ZONE 3

RECORD DRAWINGS

CONTRACTOR SHALL KEEP ACCURATE RECORD DRAWINGS WHICH SHOW THE FINAL LOCATION, ELEVATION, AND DESCRIPTION OF ALL WORK. CONTRACTOR SHALL ALSO NOTE THE LOCATION AND ELEVATION OF ANY EXISTING IMPROVEMENTS ENCOUNTERED. RECORDS SHALL BE "REDLINED" ON A SET OF CONSTRUCTION PLAN DRAWINGS AND GIVEN TO THE OWNER UPON COMPLETION OF WORK.

UNAUTHORIZED CHANGES

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THESE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY WILSEY HAM.

REVISIONS

ALL REVISIONS TO THESE PLANS MUST BE REVIEWED AND APPROVED IN WRITING BY WILSEY HAM AND THE CITY ENGINEER PRIOR TO CONSTRUCTION OF AFFECTED ITEMS.

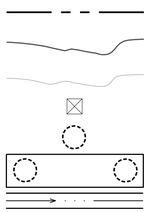
ACCURACY

AS TO THE ACCURACY BETWEEN THE WORK SET FORTH ON THESE PLANS AND THE WORK IN THE FIELD, ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF WILSEY HAM PRIOR TO START OF CONSTRUCTION OF THE PARTICULAR ITEM OF WORK.

ACCURACY OF UTILITIES

EXISTING UTILITY INFORMATION WAS PROVIDED TO WILSEY HAM AND MAY NOT HAVE BEEN VERIFIED IN THE FIELD. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND REPORT ANY CONFLICTS TO WILSEY HAM BEFORE CONSTRUCTION BEGINS.

LEGEND



APPROX. PROPERTY LINE
CONTOUR MAJOR
CONTOUR MINOR
EXISTING STORM DRAIN INLET
NEW CONCRETE PIER
NEW CONCRETE RETAINING WALL
NEW CONCRETE VALLEY GUTTER

ABBREVIATIONS

ABDN	ABANDON
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
APPROX	APPROXIMATE
BOW	BACK OF WALL
BW	BOTTOM OF WALL
CL	CENTERLINE
COW	CENTER OF WALL
DWY	DRIVEWAY
EG	EXISTING GROUND
(E), EX	EXISTING
FC	FACE OF CURB
FG	FINISHED GRADE
FOW	FRONT OF WALL
FT	FOOT OR FEET
LF	LINEAR FEET
MAX	MAXIMUM
MON	MONUMENT
(N)	NEW
R/W	RIGHT-OF-WAY
STA	STATION
TC	TOP OF CURB
TYP	TYPICAL
TW	TOP OF WALL
VIF	VERIFY IN THE FIELD

SHEET INDEX

CIVIL

NO.	DATE	ISSUE / REVISION DESCRIPTION	BY
	04/04/24	ISSUE FOR BID	

Project Mgr.:	EDC	04/04/24
Project Eng.:	SM	04/04/24
Designer:	SM	04/04/24
Checked By:	EDC	04/04/24
Drawn By:	PJB	04/04/24
	BY	DATE

WILSEY HAM
Engineering, Surveying & Planning
3130 La Selva Street, Suite 100
San Mateo, CA 94403
650.349.2151
wilseyham.com

CITY OF BURLINGAME
SAN MATEO COUNTY CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
LEGEND, ABBREVIATIONS & GENERAL NOTES

WH PROJ. NO. 140-122 CP #86780

DESIGNED UNDER THE DIRECTION OF:
ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616
DATE
EXPIRES 06/30/25

DESIGN: SM	DATE:
DRAWN: SM/PJB	DATE: 04/04/2024
CHECKED: EDC	DATE:

REGISTERED PROFESSIONAL ENGINEER
ERIC D. COHEN
C 77616
04/04/2024
CIVIL
STATE OF CALIFORNIA

SHEET 1 OF 9 SHEETS

GENERAL NOTES

1. NOTES ON THESE PLANS ARE WRITTEN TO THE BIDDER BEFORE AWARD AND THE CONTRACTOR AFTER. BEFORE AWARD, INTERPRET SENTENCES WRITTEN IN THE IMPERATIVE MOOD AS STARTING WITH "THE BIDDER MUST" AND INTERPRET "YOU" AS THE "BIDDER" AND "YOUR" AS "THE BIDDER'S". AFTER AWARD INTERPRET SENTENCES WRITTEN IN THE IMPERATIVE MOOD AS "THE CONTRACTOR MUST" AND INTERPRET "YOU" AS "THE CONTRACTOR" AND "YOUR" AS "THE CONTRACTOR'S".
2. PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE BURLINGAME'S STANDARD SPECIFICATIONS AND 2010 CALTRANS STANDARD SPECIFICATIONS AND THE STANDARD PLANS, AND AS SHOWN ON THESE PROJECT PLANS AND SPECIAL PROVISIONS.
3. THE CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR IS REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THIS REQUIREMENT APPLIES CONTINUOUSLY AND IS NOT LIMITED TO NORMAL WORKING HOURS.
4. NOTIFY THE CITY ENGINEER IN WRITING FIVE (5) WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS. GIVE THE CITY OF BURLINGAME ENGINEERING DEPARTMENT AT LEAST THREE (3) WORKING DAYS ADVANCE NOTICE PRIOR TO BEGINNING OF ACTUAL WORK AND ALL REQUIRED INSPECTION REQUESTS, AT (650) 558-7300.
5. NOTIFY THE CITY ENGINEER OF ANY DISCREPANCIES OR UNUSUAL CONDITIONS ASSOCIATED WITH EXISTING CONDITIONS, THE PLANS, DETAILS OR CONSTRUCTION NOTES FIVE (5) WORKING DAYS PRIOR TO FINALIZATION OF BIDS AND COMMENCEMENT OF ANY CONSTRUCTION.
6. HORIZONTAL AND VERTICAL DIMENSIONS PROVIDED ON THE DRAWINGS ARE BASED ON FIELD MEASUREMENTS. ADJUSTMENTS MAY BE MADE BY THE ENGINEER DURING CONSTRUCTION. PAYMENT WILL BE BASED ON QUANTITIES INSTALLED.
7. YOU ARE RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE CITY ENGINEER.
8. INTERPRET NOTES APPEARING ON THESE PLANS AS REFERRING TO INCIDENTAL WORK REQUIRED FOR THE ACTIVITIES SPECIFICALLY LISTED IN THE BID SCHEDULE. NO ADDITIONAL COMPENSATION IS ALLOWED FOR ACTIVITIES OTHER THAN THOSE LISTED IN THE BID SCHEDULE.
9. PROVIDE ALL MATERIALS, LABOR, EQUIPMENT AND APPARATUS NOT SPECIFICALLY MENTIONED ON THE PLANS OR SPECIFICATIONS, BUT WHICH ARE NECESSARY TO COMPLETE THE CONTRACTED WORK.
10. EXISTING UTILITY DRIVEWAY, SIGN AND TREE LOCATIONS & QUANTITIES ARE APPROXIMATE ONLY.

PERMITS AND REGULATIONS:

1. COMPLY WITH THE RULES AND REGULATIONS OF THE STATE'S CONSTRUCTION SAFETY ORDERS.
2. IMMEDIATELY REPORT ANY SOIL OR WATER CONTAMINATION NOTICED DURING CONSTRUCTION TO THE CITY OF BURLINGAME.
3. ADHERE TO ALL REQUIREMENTS OF THE SAN MATEO COUNTY HEALTH SERVICES AGENCY.
4. CONSTRUCTION HOURS ARE 8AM TO 5PM MONDAY THROUGH FRIDAY, EXCEPT IN THE CASE OF URGENT NECESSITY IN THE INTEREST OF PUBLIC HEALTH AND SAFETY, AND THEN ONLY WITH THE EXPRESS WRITTEN PERMISSION OF THE ENGINEER.

SURVEY NOTES

1. PROTECT ANY SURVEYING MONUMENTS FOUND WITHIN PROJECT AREA, AND FURTHER, YOU ARE FINANCIALLY RESPONSIBLE FOR RESETTING MONUMENTS DAMAGED OR DESTROYED BY THE CONSTRUCTION OPERATIONS INCLUDING FILING THE CORNER RECORD(S) AS REQUIRED BY LAW.
2. YOU MUST SATISFY YOURSELF AS TO THE CORRECTNESS OF THE EXISTING TOPOGRAPHY, UTILITIES, AND EXISTING CONDITIONS PRIOR TO BIDDING THE PROJECT.
3. SURVEY WAS PERFORMED BY DAINS LAND SURVEYING PERFORMED ON 09/22/23 WITH SUPPLEMENTAL SURVEY INFORMATION PROVIDED BY WILSEY HAM ON 10/04/23.
4. EXISTING CONTOURS SHOWN ON THESE PLANS WERE SURVEYED BEFORE ANY WINTERIZATION OR SLOPE MITIGATION METHODS WERE PERFORMED.

EROSION CONTROL

1. EROSION CONTROL MEASURES MUST BE INSTALLED AS NECESSARY TO PREVENT SEDIMENT RUNOFF TO PUBLIC DRAINAGE FACILITIES, ADJACENT PROPERTIES AND THE SAN FRANCISCO BAY.
2. DURING THE PROGRESS OF THE CONSTRUCTION WORK MAINTAIN THE PREMISES IN A NEAT AND CLEAN CONDITION, DISPOSING OF REFUSE IN A SATISFACTORY MANNER AS OFTEN AS DIRECTED OR AS MAY BE NECESSARY SO AT NO TIME IS THERE ANY UNSIGHTLY ACCUMULATION OF RUBBISH AT THE JOB SITE.
3. YOU ARE RESPONSIBLE FOR ANY DAMAGE TO THE SITE OR SURROUNDING AREA DUE TO DUST AND/OR EROSION, RESULTING FROM WORK. YOU MUST PROVIDE A SEVEN (7) DAY PHONE NUMBER TO RECEIVE AND RESPOND TO DUST COMPLAINTS. SAID PHONE NUMBER MUST BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETE. NOTIFY ALL BUSINESSES AND RESIDENTS WITHIN 300' OF THE PROJECT BY MAIL PRIOR TO ANY CONSTRUCTION WITH INFORMATION AND COMPLAINT LINES TO BE CALLED.
4. REMOVE/CLEAN ANY SEDIMENT FROM INLETS. DURING STORM EVENTS ENSURE THAT THE DRAINS ARE DRAINING ADEQUATELY AND NOT CAUSING ANY FLOODING IN THE AREA OR CREATING HAZARD TO PEDESTRIANS AND VEHICLES.
5. UPON SATISFACTORY COMPLETION OF THE WORK, THE ENTIRE WORK SITE MUST BE CLEAN AND FREE OF CONSTRUCTION WASTE, RUBBISH AND DEBRIS OF ANY NATURE TO THE SATISFACTION OF THE CITY ENGINEER.

CONSTRUCTION NOTES

1. POST EMERGENCY TELEPHONE NUMBERS FOR POLICE, FIRE, AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF JOB SITE.
2. REPLACE OR REPAIR, AT YOUR SOLE EXPENSE, ALL DAMAGED, REMOVED OR OTHERWISE DISTURBED FACILITIES, WALLS, FENCES, SERVICES, UTILITIES, STRIPING, IMPROVEMENTS OR FEATURES OF WHATEVER NATURE, TO THEIR ORIGINAL CONDITION, WHETHER SHOWN ON THE PLANS OR NOT; PROVIDED SUCH REPAIR OR REPLACEMENT IS CAUSED BY CONTRACT WORK OPERATIONS.
3. MAINTAIN ALL JOB SITE FACILITIES UNTIL ACCEPTED BY THE CITY.
4. PLACE ALL EXCAVATION SPOILS DIRECTLY INTO TRUCKS AND DISPOSE OF AT AN APPROVED DUMPSITE.
5. THE FOLLOWING CONTROL MEASURES FOR CONSTRUCTION ACTIVITIES MUST BE ADHERED TO, UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
   a. DO NOT BEGIN ANY CONSTRUCTION WORK EARLIER THAN 8:00AM AND BE COMPLETE BY 5:00PM, MONDAY THROUGH FRIDAY. NIGHT WORK IS NOT ALLOWED UNLESS AUTHORIZED IN WRITING BY THE ENGINEER.
   b. YOU ARE RESPONSIBLE FOR THE DISPOSAL OF ANY EXCESS MATERIALS FROM THE WORK SITE.
   c. STORAGE OF CONSTRUCTION MATERIALS AND EQUIPMENT IS NOT ALLOWED IN OR UPON THE PUBLIC RIGHT-OF-WAY. ALL MATERIALS INTENDED FOR USE ON THE PROJECT MUST BE OFF-LOADED DIRECTLY FROM DELIVERY VEHICLES AND PLACED AS REQUIRED DURING THE COURSE OF CONSTRUCTION. SHOULD YOU OR YOUR SUB-CONTRACTORS WISH TO STOCKPILE MATERIALS NEAR THE WORK SITE, YOU MUST MAKE ARRANGEMENTS IN ADVANCE FOR STORAGE. ALL STORAGE SITES MUST BE SECURE, INACCESSIBLE TO THE GENERAL PUBLIC, AND KEPT FREE OF CONSTRUCTION SPOILS, DEBRIS, AND TRASH AT ALL TIMES. STORAGE SITES ARE SUBJECT TO THE REVIEW AND APPROVAL OF THE CITY ENGINEER.
   d. SUPPLY AND MAINTAIN SANITARY FACILITIES FOR THE WORKERS AT THE CONSTRUCTION SITE.
6. MAINTAIN AND KEEP ALL VEHICULAR & PEDESTRIAN TRAFFIC ACCESS OPEN TO SURROUNDING RESIDENCES UNLESS APPROVED BY THE ENGINEER.
7. PROVIDE NECESSARY TEMPORARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT VERSION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CAMUTCD).
8. INSTALL CHAIN-LINKED FENCE AND GATE AT THE CONSTRUCTION SITE ENTRANCE/EXIT. SECURE CONSTRUCTION SITE DURING NON-WORKING HOURS.
9. STAGING OF EQUIPMENT MUST BE DONE WITHIN THE PROJECT LIMITS. NO STAGING WILL BE ALLOWED WITHIN THE PUBLIC STREETS.
10. THE CONTRACTOR SHALL SECURE THE PROJECT SITE WITH A CHAIN FENCE AT THE END OF THE ALLEYWAY PRIOR TO ENTERING MILLS CANYON PARK.

TREE PROTECTION

1. ALL TREES AND SHRUBS WITHIN THE CITY EASEMENTS, RIGHT-OF-WAY, CITY PROPERTY, AND ON PRIVATE PROPERTY ADJACENT TO THE PROJECT WORK MUST BE PROTECTED FROM DAMAGE DURING CONSTRUCTION. CONTRACTOR MUST DEVELOP METHODS TO WORK AROUND ALL TREES.
2. NOT ALL TREES AND SHRUBS ARE SHOWN ON THE PLANS.
3. CONTACT CITY ENGINEER, INSPECTOR, AND CITY ARBORIST TO IDENTIFY TREES TO BE PRUNED IN CITY RIGHT-OF-WAY OR EASEMENTS AS REQUIRED FOR ACCESS TO PROJECT AREA. CONTACT CITY ARBORIST AT (650)558-7330.
4. THE CITY ARBORIST MUST BE PRESENT DURING EXCAVATION AND/OR DEMOLITION WORK BELOW DRIP LINES OF EXISTING TREES. TRENCHING AND EXCAVATION WITHIN 10' OF TREE TRUNKS REQUIRES CITY'S WRITTEN AUTHORIZATION IF AT ANYTIME THERE IS A TREE THAT IS JEOPARDIZED BY EXCAVATION OR TRENCHING, THE CITY ARBORIST MUST BE CONTACTED BY THE CONTRACTOR. HAND DIGGING IS REQUIRED WHEN INSTALLING UNDER OR IN THE VICINITY OF THE TREE ROOTS. ROOTS OF 2" IN DIAMETER AND LARGER MUST REMAIN TO BRIDGE THE TRENCH, EXCEPT AS APPROVED BY THE ARBORIST.

UTILITY NOTES

1. EXISTING UTILITIES ARE SHOWN BASED UPON AVAILABLE INFORMATION. THERE MAY BE ADDITIONAL EXISTING FACILITIES NOT SHOWN ON THESE PLANS. LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES SHOWN ARE APPROXIMATE ONLY. IT IS YOUR RESPONSIBILITY TO VERIFY THE ACTUAL LOCATION OF UTILITIES PRIOR TO THE COMMENCEMENT OF WORK. CONTACT THE UTILITY NOTIFICATION CENTER OF CALIFORNIA AT 811 AT LEAST 48 HOURS IN ADVANCE OF ANY EXCAVATION.
2. PERFORM PHYSICAL VERIFICATION OF ANY UTILITY LOCATIONS IN THE PROJECT SITE BY POTHOLING OR HAND DIGGING AND CAREFUL SUBSURFACE PROBING IN CONFORMANCE WITH ALL CAL/OSHA CONSTRUCTION SAFETY ORDERS. ANY DEVIATIONS FROM LOCATIONS SHOWN ON PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION BEFORE STARTING CONSTRUCTION.
3. ALL EXISTING UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION MUST BE COMPLETEEY RESTORED TO THE SATISFACTION OF THE CITY ENGINEER AND THE UTILITY OWNER AT YOUR SOLE EXPENSE.
4. IT IS YOUR RESPONSIBILITY TO COORDINATE WITH THE APPROPRIATE UTILITY COMPANIES AND TO OBTAIN ANY PERMITS REQUIRED BY THE CITY OF BURLINGAME AND ALL OTHER AGENCIES NECESSARY IN ORDER TO DO THE WORK SHOWN ON THESE PLANS.
5. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES AND TOPOGRAPHIC FEATURES ARE APPROXIMATELY SHOWN AND HAVE NOT BEEN INDEPENDENTLY VERIFIED. YOU MUST DETERMINE THE TRUE LOCATION OF ALL EXISTING UTILITIES RELATIVE TO THE PROPOSED IMPROVEMENTS BEFORE COMMENCING WORK. YOU ARE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH RESULT FROM YOUR FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES, BUILDINGS AND WALLS. NOTIFY THE UTILITY COMPANIES THAT WILL BE AFFECTED BY THE WORK TO OBTAIN ASSISTANCE IN LOCATING EXISTING MAINS AND SERVICE CONNECTIONS. MAJOR UTILITY COMPANIES WITH KNOWN EXISTING UNDERGROUND UTILITIES IN THE AREA ARE:

UTILITY COMPANY	UTILITY	TELEPHONE NO.
PG&E	GAS, ELECTRIC	650-598-7492
TELEPHONE	AT&T	408-635-8879
CALWATER	WATER	650-558-7800
COMCAST	CABLE	650-259-7008
CITY OF BURLINGAME	SEWER	650-558-7230
	STORM DRAIN	
	WATER	

NO.	DATE	ISSUE / REVISION DESCRIPTION	BY
	04/04/24	ISSUE FOR BID	

Project Mgr.:	EDC	04/04/24
Project Eng.:	SM	04/04/24
Designer:	SM	04/04/24
Checked By:	EDC	04/04/24
Drawn By:	PJB	04/04/24
	BY	DATE

WILSEY HAM
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3130 La Selva Street, Suite 100
San Mateo, CA 94403
650.349.2151
wilseyham.com

CITY OF BURLINGAME
SAN MATEO COUNTY CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
GENERAL NOTES

WH PROJ. NO. 140-122 CP #86780

DESIGNED UNDER THE DIRECTION OF:
ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616
DATE
EXPIRES 06/30/25

DESIGN:	SM	DATE:
DRAWN:	SM/PJB	DATE: 04/04/2024
CHECKED:	EDC	DATE:

REGISTERED PROFESSIONAL ENGINEER
ERIC D. COHEN
C 77616
04/04/2024
CIVIL
STATE OF CALIFORNIA

SHEET 2 OF 9 SHEETS

H:\140-Burlingame\140-122 Mills Canyon Landslide Repair\Engineering\Construction Drawings\1-2 TITLE SHEET.dwg 4-04-24 10:00:36 AM pbusinger

LEGEND:

- REMOVE EX STAIRS, LANDING & WALL
- TEMPORARY ACCESS ROAD

GENERAL NOTES:

1. TEMPORARY CONSTRUCTION ACCESS ROAD SHALL BE GRADED AND COMPACTED NATIVE SOIL TO 90% RELATIVE COMPACTION.
2. TEMPORARY ACCESS ROAD TO BE RECOMPACTED BACK TO THE OLD SLOPE AND CONTOURS AFTER CONSTRUCTION OF THE RETAINING WALL IS DONE.
3. CONTRACTOR SHALL MINIMIZE DISTURBANCE IN THE DRILLING AREA TO THE MAXIMUM EXTENT POSSIBLE. LIMITED GRADING WILL BE ALLOWED WITH PRIOR APPROVAL OF THE ENGINEER. AT THE COMPLETION OF THE PROJECT, THE AREA DOWNHILL OF THE WALL SHALL BE RESTORED TO THE EXISTING CONDITION AND HYDROSEEDED PER SHEET 6. SEE SHEET 6 FOR SEEDING REQUIREMENTS.
4. PRIVATE IMPROVEMENTS HAVE BEEN BUILT ON THE CITY PARCEL. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VISIT THE SITE AND DETERMINE THE ACCESS NEEDED TO PERFORM THE WORK. REMOVAL OF PRIVATE IMPROVEMENTS SHALL BE LIMITED TO THE MAXIMUM EXTENT POSSIBLE. IF CONTRACTOR DETERMINES THAT THE FENCE MUST BE REMOVED, THEN A REPLACEMENT FENCE OF SIMILAR CONSTRUCTION WILL BE INSTALLED WHERE ACCESS IS NECESSARY.

2901 ARGUELLO DRIVE
A.P.N. 025-293-120
LOT 23, BLOCK 39
52 MAPS 2-3

2847 ARGUELLO DRIVE
A.P.N. 025-034-150
LOT 22, BLOCK 34
46 MAPS 35-36

2843 ARGUELLO DRIVE
A.P.N. 025-034-140
LOT 21, BLOCK 34
46 MAPS 35-36

2839 ARGUELLO DRIVE
A.P.N. 025-034-130
LOT 20, BLOCK 34
46 MAPS 35-36

PT #200, EL = 428.84
CTL SET CUT X TC
E = 6013183.28
N = 2039334.76

PT #202, EL = 428.46
MON 1¾" BRASS TAG & NAIL
E = 6013172.09
N = 2039349.92

ARGUELLO DRIVE (50' R/W)

S 35°00'00" W 75.00'

S 35°00'00" W 20.00'

N 55°00'00" W 100.00'

N 55°00'00" W 100.00'

S 45°30'00" W 80.00'

S 40°42'43" W 72.46'

S 40°42'43" W 79.36'

S 40°42'43" W 79.36'

REMOVE EX. WALL

REMOVE EX. COLUMNS

REMOVE EX. STAIRS

NEW RETAINING WALL

FG 413.0± MATCH EX.

EP 404.80

EP 404.0± MATCH EX

EP 406.0± MATCH EX

FG 411.8± MATCH EX.

EP 406.80

APPROXIMATE LOCATION OF LANDSLIDE

REMOVE & REINSTALL EX. FENCE IN KIND SEE NOTE 4

PROTECT EX TREES

EXISTING FLOWER POTS (TYP)

EP 427.7± MATCH EX

FG 421.7± MATCH EX.

FG 414.1± MATCH EX.

EP 430.5± MATCH EX

EP 418.42

EP 413.72

EP 424.50

EP 417.34

EP 412.84

FG 418.0± MATCH EX.

FG 412.0± MATCH EX.

FG 411.3± MATCH EX.

NEW TEMPORARY STABILIZED ACCESS ROAD SEE NOTE 1 & 2.

EX. ACCESS ROAD

10' ACCESS ROAD

APPROXIMATE DRIPLINE (TYPICAL)

PT #2000, EL = 390.29
CTL FND 60D
E = 6013415.06
N = 2039295.13

TEMPORARY BENCHMARK: NAIL AND FEATHER

0 5 10 20 30
0 1 2 3

CALL UTILITY NOTIFICATION CENTER OF CALIFORNIA
811
Know what's below.
Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NO.	DATE	ISSUE / REVISION DESCRIPTION	BY
	04/04/24	ISSUE FOR BID	

		BY	DATE
Project Mgr.:	EDC		04/04/24
Project Eng.:	SM		04/04/24
Designer:	SM		04/04/24
Checked By:	EDC		04/04/24
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CITY OF BURLINGAME
SAN MATEO COUNTY — CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
ACCESS ROAD PLAN

WH PROJ. NO. 140-122 — CP #86780

DESIGNED UNDER THE DIRECTION OF:
ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616 — DATE EXPIRES 06/30/25

DESIGN: SM — DATE:
DRAWN: SM/PJB — DATE: 04/04/2024
CHECKED: EDC — DATE:

REGISTERED PROFESSIONAL ENGINEER — ERIC D. COHEN — C 77616 — 04/04/2024 — CIVIL — STATE OF CALIFORNIA

SHEET 3 OF 9 SHEETS

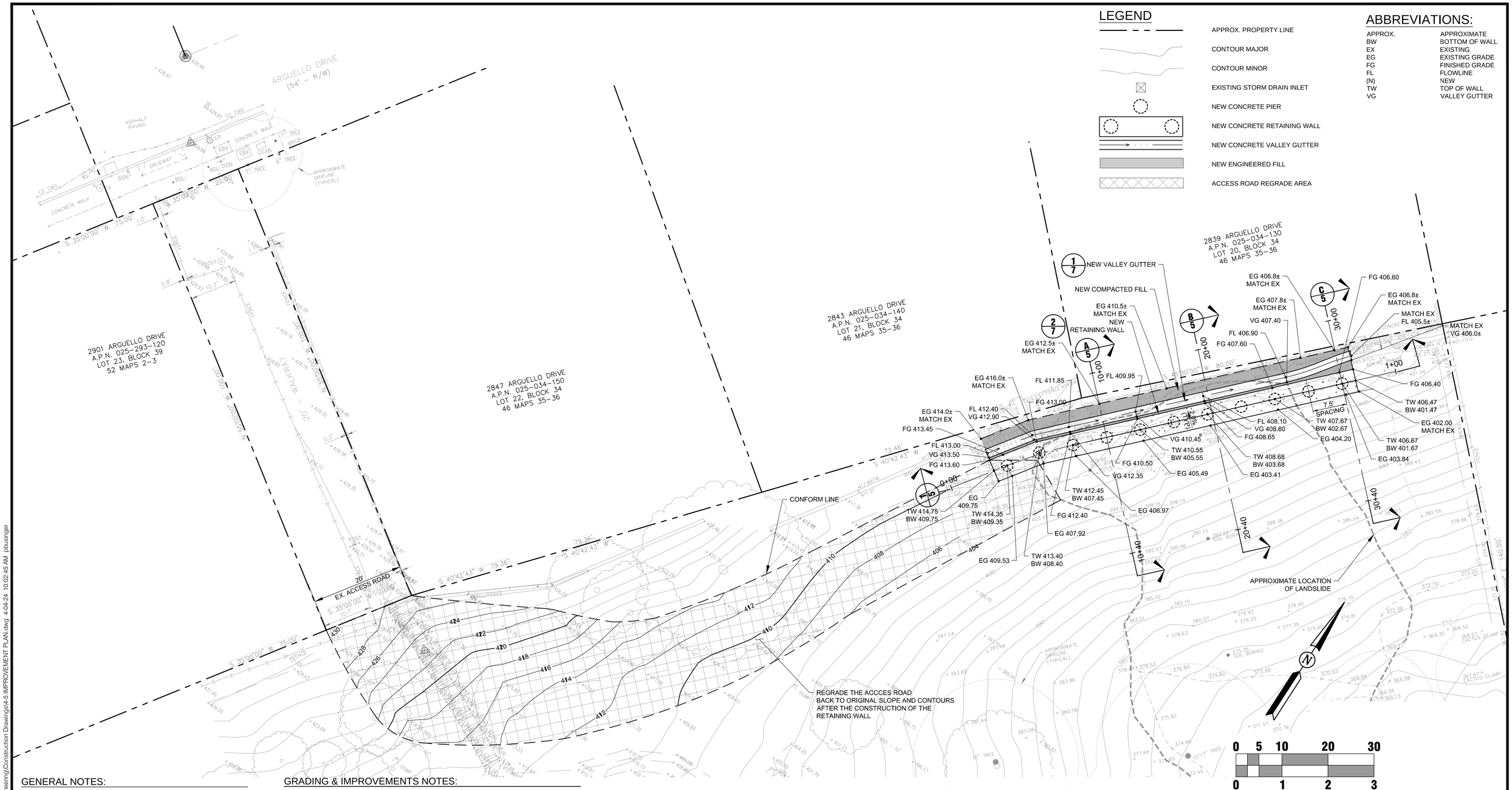
H:\140-Burlingame\140-122 Mills Canyon Landslide Repair\Engineering\Construction Drawings\3 ACCESS ROAD PLAN.dwg 4-04-24 12:38:22 PM smandalka

LEGEND

- APPROX. PROPERTY LINE
- CONTOUR MAJOR
- CONTOUR MINOR
- EXISTING STORM DRAIN INLET
- NEW CONCRETE PIER
- NEW CONCRETE RETAINING WALL
- NEW CONCRETE VALLEY GUTTER
- NEW ENGINEERED FILL
- ACCESS ROAD REGRADE AREA

ABBREVIATIONS:

APPROX.	APPROXIMATE
BW	BOTTOM OF WALL
EX	EXISTING
EG	EXISTING GRADE
FG	FINISHED GRADE
FL	FLOWLINE
(N)	NEW
TW	TOP OF WALL
VG	VALLEY GUTTER



GENERAL NOTES:

1. SOIL COMPACTION AND FOUNDATION EXCAVATION HAS TO BE CARRIED OUT PER GEOTECHNICAL ENGINEERS REPORT.
2. RETAINING WALL DESIGN INCORPORATES THE RECOMMENDATION BY THE PROJECTS GEOTECHNICAL ENGINEERS REPORT: "GEOTECHNICAL INVESTIGATION FOR MILLS CANYON PARK LANDSLIDE, BURLINGAME, CALIFORNIA" DATED AUGUST 5, 2023.
3. EXISTING CONTOURS SHOWN ON THIS PLAN WERE SURVEYED BEFORE ANY WINTERIZATION OR SLOPE MITIGATION METHODS WERE PERFORMED.

GRADING & IMPROVEMENTS NOTES:

1. ALL MATERIAL AND WORKMANSHIP SHALL FULLY CONFORM WITH THE SPECIFICATIONS, STANDARDS, AND ORDINANCES OF CALTRANS AND THE CITY OF BURLINGAME, STANDARD SPECIFICATIONS AND DETAILS ARE AVAILABLE IN THE OFFICE OF THE CITY ENGINEER.
2. ANY EXTRA CONSTRUCTION STAKING NECESSITATED SOLELY BY THE CONTRACTOR'S NEGLIGENCE WILL BE PAID FOR BY THE CONTRACTOR ON A TIME AND MATERIALS BASIS.
3. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY FIELD CHANGES MADE WITHOUT WRITTEN AUTHORIZATION FROM THE CITY ENGINEER.
4. ALL EXISTING UTILITIES AND PRIVATE IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE CITY ENGINEER, AT CONTRACTOR'S SOLE EXPENSE.
5. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY AND THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT JUST DURING NORMAL WORKING HOURS.
6. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
7. EXISTING UTILITIES SHALL BE MAINTAINED IN SERVICE AND IN PLACE BY THE CONTRACTOR DURING CONSTRUCTION UNLESS OTHERWISE SHOWN.

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Project Eng.:	SM	04/04/24
Designer:	SM	04/04/24
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Drawn By:	PJB	04/04/24
	BY	DATE

WILSEY HAM
Engineering, Surveying & Planning
3130 La Selva Street, Suite 100
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650.349.2151
wilseyham.com

CITY OF BURLINGAME
SAN MATEO COUNTY — CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
IMPROVEMENT PLAN

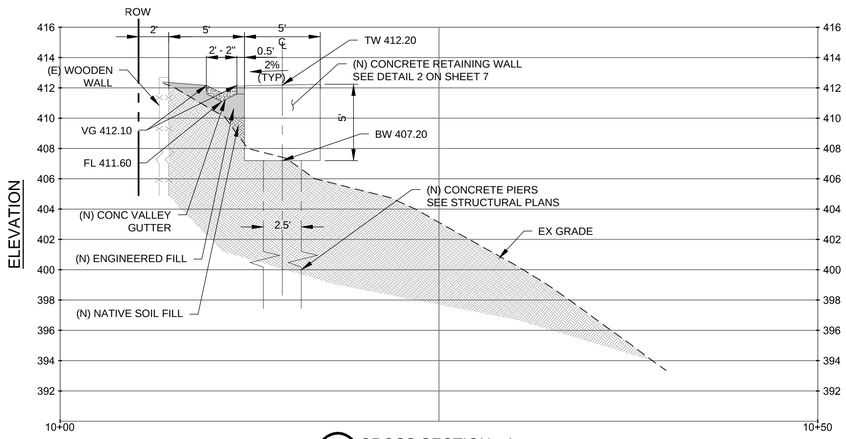
WH PROJ. NO. 140-122 — CP #86780

DESIGNED UNDER THE DIRECTION OF:
Eric D Cohen
ERIC D. COHEN, WILSEY HAM, R.C.E. NO. 77616 — DATE EXPIRES 06/30/25
DESIGN: SM — DATE:
DRAWN: SM/PJB — DATE: 04/04/2024
CHECKED: EDC — DATE:

REGISTERED PROFESSIONAL ENGINEER — ERIC D. COHEN — C 77616 — 04/04/2024 — CIVIL — STATE OF CALIFORNIA

SHEET 4 OF 9 SHEETS

H:\140-Burlingame\140-122 Mills Canyon Landslide Repair\Engineering\Construction Drawings\4-5 IMPROVEMENT PLAN.dwg 4-04-24 10:02:45 AM pbusinger



A CROSS SECTION - A
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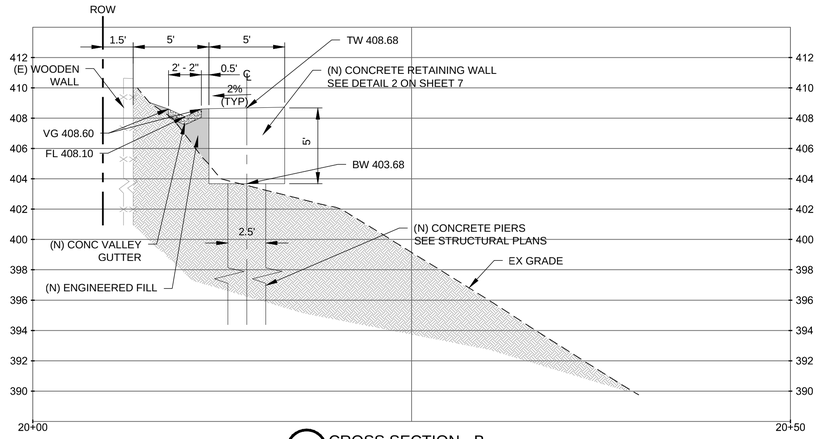
1"=10' Vertical



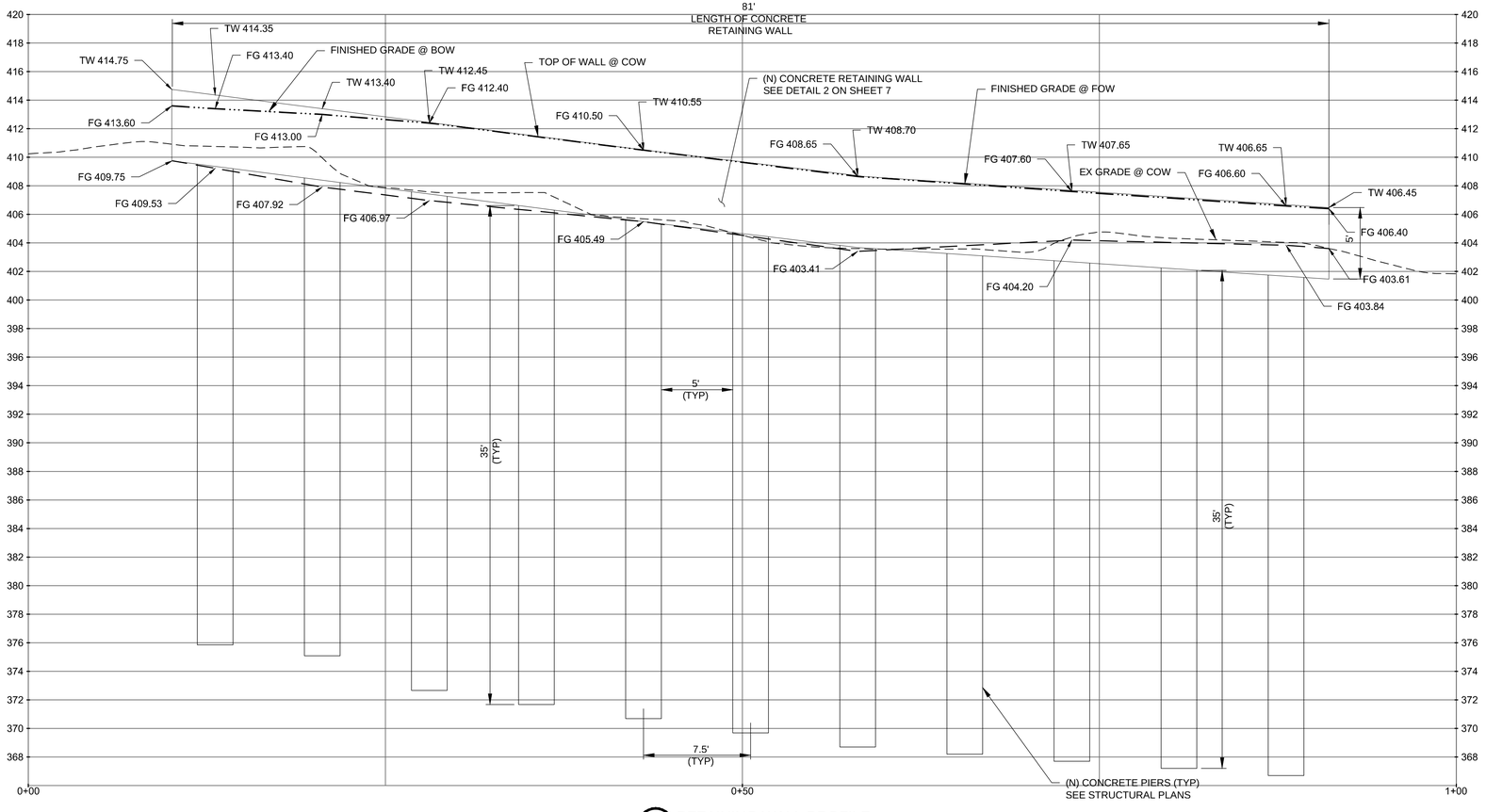
B CROSS SECTION - B
Scale: 1"=10' Horizontal
1"=10' Vertical

ABBREVIATIONS:

BW	BOTTOM OF WALL
BOW	BACK OF WALL
℄	CENTERLINE
COW	CENTER OF WALL
EG	EXISTING GRADE
FL	FLOWLINE
FOW	FRONT OF WALL
ROW	RIGHT OF WAY
TW	TOP OF WALL
VG	VALLEY GUTTER

LEGEND:

- TOP OF WALL AT CENTER OF WALL
- FINISHED GRADE AT BACK OF WALL
- FINISHED GRADE AT FRONT OF WALL
- EXISTING GRADE AT CENTER OF WALL
- NEW ENGINEERING FILL AREA
- NEW NATIVE SOIL FILL AREA



1 RETAINING WALL PROFILE
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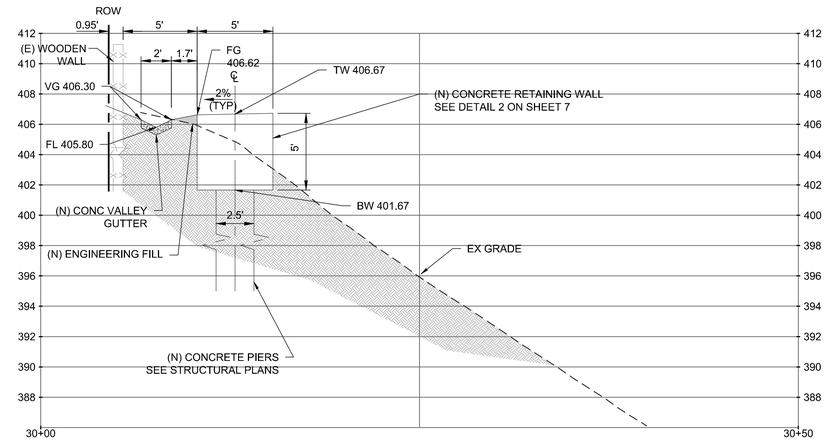
1"=10' Vertical



C CROSS SECTION - C
Scale: 1"=10' Horizontal
1"=10' Vertical

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CITY OF BURLINGAME
SAN MATEO COUNTY CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
CONCRETE RETAINING WALL PROFILE

WH PROJ. NO. 140-122 CP #86780

DESIGNED UNDER THE DIRECTION OF:
ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616
DATE
EXPIRES 06/30/25

DESIGN: SM DATE:
DRAWN: SM/PJB DATE: 04/04/2024
CHECKED: EDC DATE:

REGISTERED PROFESSIONAL ENGINEER
ERIC D. COHEN
C 77616
04/04/2024
CIVIL
STATE OF CALIFORNIA

SHEET 5 OF 9 SHEETS

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HYDROSEED NOTES

HYDROSEED SHALL BE APPLIED AS SHOWN ON PLANS.
HYDROSEED SHALL BE GERMINATED AND MEET THE SPECIFICATIONS BELOW.

HYDROSEED MIX: NATIVE ORNAMENTAL FINE FESCUE (70lbs per acre)
43% FESTUCA RUBRA, MOLATE (MOLATE RED FESCUE) (30lbs)
43% FESTUCA IDA HOENSIS (NATIVE IDAHO FESCUE) (30lbs)
14% FESTUCA OVINA INGRATA (MOKELUMNE BLUE WESTERN FESCUE) (10lbs)

BMP CONSTRUCTION NOTES

1. THE LAYOUT OF THE BMPs SHOWN ON THIS PLAN IS SCHEMATIC. THE CONTRACTOR SHALL PLACE THESE BMPs TO FACILITATE CONSTRUCTION AND MEET THE REQUIREMENTS OF THE NPDES GENERAL PERMIT (NO. 2009-0009-DWQ), INCLUDING ATTACHMENT D.

2. MAXIMUM SPACING OF FIBER ROLLS SHALL BE AS FOLLOWS:

GROUND SLOPE	MAX SPACING
0-25% (FLAT TO 4:1)	20'
25-50% (4:1 TO 2:1)	15'
>50% (MORE THAN 2:1)	10'

GENERAL NOTES

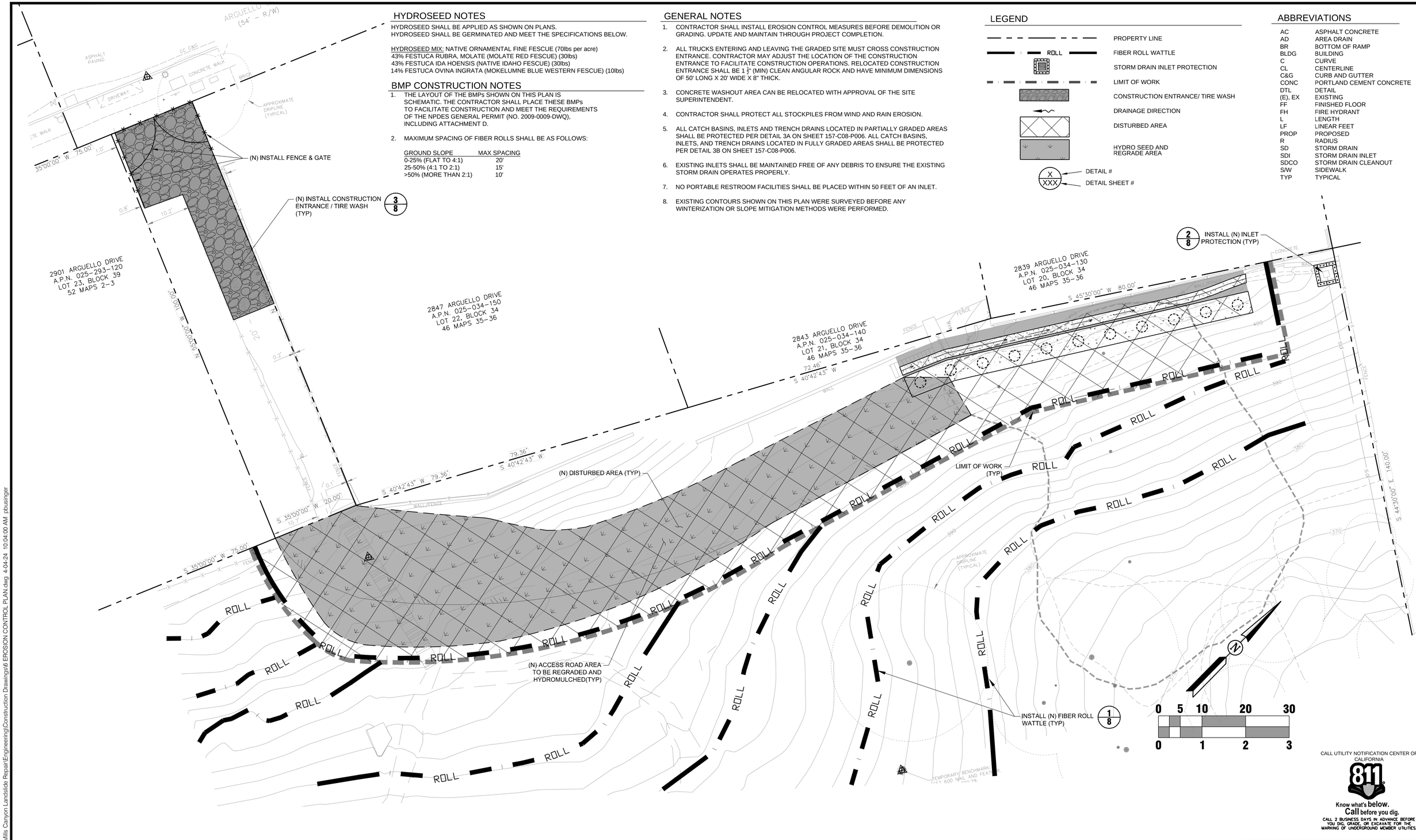
1. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES BEFORE DEMOLITION OR GRADING. UPDATE AND MAINTAIN THROUGH PROJECT COMPLETION.
2. ALL TRUCKS ENTERING AND LEAVING THE GRADED SITE MUST CROSS CONSTRUCTION ENTRANCE. CONTRACTOR MAY ADJUST THE LOCATION OF THE CONSTRUCTION ENTRANCE TO FACILITATE CONSTRUCTION OPERATIONS. RELOCATED CONSTRUCTION ENTRANCE SHALL BE 1 ½" (MIN) CLEAN ANGULAR ROCK AND HAVE MINIMUM DIMENSIONS OF 50' LONG X 20' WIDE X 8" THICK.
3. CONCRETE WASHOUT AREA CAN BE RELOCATED WITH APPROVAL OF THE SITE SUPERINTENDENT.
4. CONTRACTOR SHALL PROTECT ALL STOCKPILES FROM WIND AND RAIN EROSION.
5. ALL CATCH BASINS, INLETS AND TRENCH DRAINS LOCATED IN PARTIALLY GRADED AREAS SHALL BE PROTECTED PER DETAIL 3A ON SHEET 157-C08-P006. ALL CATCH BASINS, INLETS, AND TRENCH DRAINS LOCATED IN FULLY GRADED AREAS SHALL BE PROTECTED PER DETAIL 3B ON SHEET 157-C08-P006.
6. EXISTING INLETS SHALL BE MAINTAINED FREE OF ANY DEBRIS TO ENSURE THE EXISTING STORM DRAIN OPERATES PROPERLY.
7. NO PORTABLE RESTROOM FACILITIES SHALL BE PLACED WITHIN 50 FEET OF AN INLET.
8. EXISTING CONTOURS SHOWN ON THIS PLAN WERE SURVEYED BEFORE ANY WINTERIZATION OR SLOPE MITIGATION METHODS WERE PERFORMED.

LEGEND

- PROPERTY LINE
- FIBER ROLL WATTLE
- STORM DRAIN INLET PROTECTION
- LIMIT OF WORK
- CONSTRUCTION ENTRANCE/ TIRE WASH
- DRAINAGE DIRECTION
- DISTURBED AREA
- HYDRO SEED AND REGRADE AREA
- DETAIL # / DETAIL SHEET #

ABBREVIATIONS

AC	ASPHALT CONCRETE
AD	AREA DRAIN
BR	BOTTOM OF RAMP
BLDG	BUILDING
C	CURVE
CL	CENTERLINE
C&G	CURB AND GUTTER
CONC	PORTLAND CEMENT CONCRETE
DTL	DETAIL
(E), EX	EXISTING
FF	FINISHED FLOOR
FH	FIRE HYDRANT
L	LENGTH
LF	LINEAR FEET
PROP	PROPOSED
R	RADIUS
SD	STORM DRAIN
SDI	STORM DRAIN INLET
SDCO	STORM DRAIN CLEANOUT
S/W	SIDEWALK
TYP	TYPICAL



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CITY OF BURLINGAME
SAN MATEO COUNTY — CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
EROSION CONTROL PLAN

WH PROJ. NO. 140-122 — CP #86780

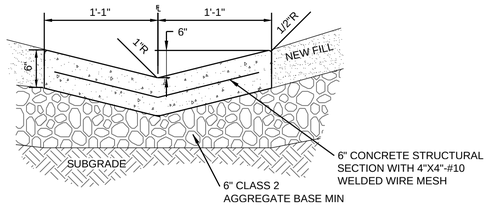
DESIGNED UNDER THE DIRECTION OF:
ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616
DATE
EXPIRES 06/30/25

DESIGN:	SM	DATE:	
DRAWN:	SM/PJB	DATE:	04/04/2024
CHECKED:	EDC	DATE:	

REGISTERED PROFESSIONAL ENGINEER — ERIC D. COHEN — C 77616 — 04/04/2024 — CIVIL — STATE OF CALIFORNIA

SHEET 6 OF 9 SHEETS

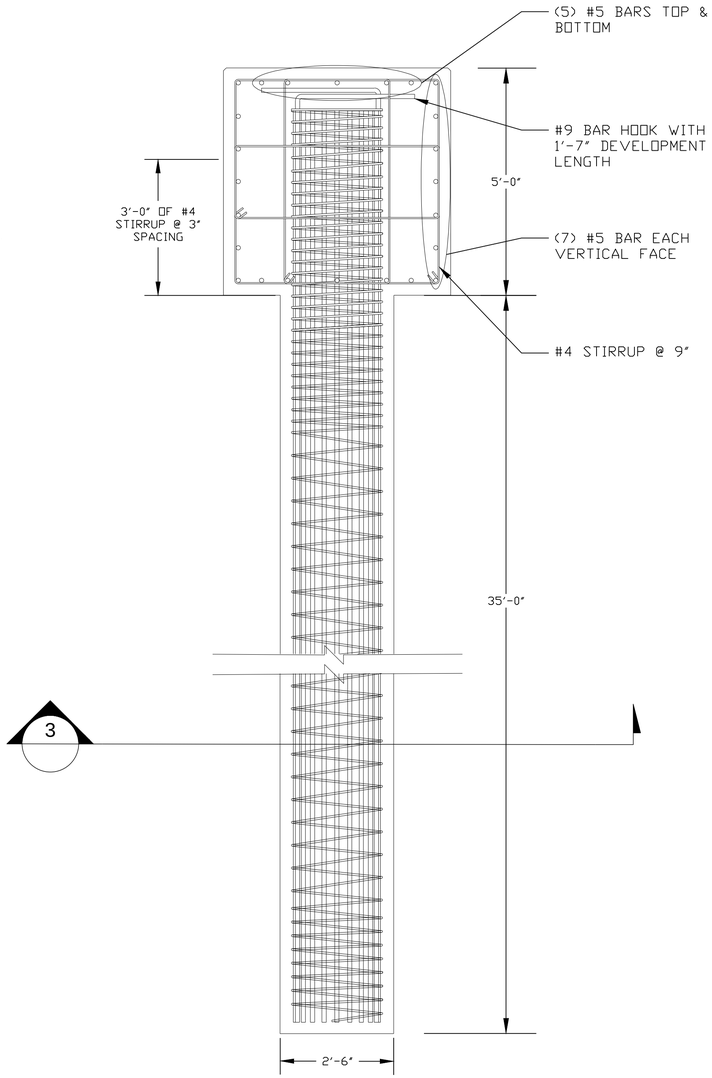
H:\140-Burlingame\140-122 Mills Canyon Landslide Repair\Engineering\Construction Drawings\6 EROSION CONTROL PLAN.dwg 4-04-24 10:04:00 AM pbusinger



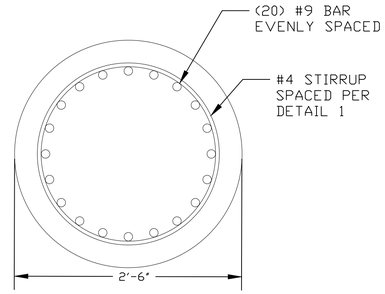
NOTES:

1. PLACE 1/2"X4" ASPHALTIC FIBER EXPANSION JOINT AT RETURNS, AND AT 20' INTERVALS.
2. CONCRETE SHALL BE 6 SACK, fc=3,000 psi. SEE SPECIFICATIONS FOR COLOR.

1 VALLEY GUTTER
NOT TO SCALE



2 RETAINNING WALL DETAIL
NOT TO SCALE



3 PILE CROSS SECTION
NOT TO SCALE

GENERAL STRUCTURAL NOTES

GENERAL

1. EXCEPT AS OTHERWISE INDICATED, THE CONTRACTOR SHALL COMPLY WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC GREENBOOK).
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK. THE ENGINEER OF RECORD SHALL BE NOTIFIED OF ANY DISCREPANCIES.
3. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ADEQUATE ERECTION, SHORING, AND BRACING AS REQUIRED FOR STABILITY OF ALL STRUCTURES AND EMBANKMENTS DURING ALL PHASES OF CONSTRUCTION.
4. IN NO CASE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS OR DETAILS ON THE DRAWINGS.
5. BEFORE COMMENCING ANY EXCAVATION, THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES, VALVE PITS OR VAULTS, AND SHALL NOT PERFORM ANY WORK THAT WILL DAMAGE OR INTERFERE WITH THEIR SERVICE.
6. STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL, ELECTRICAL, OR OTHER UTILITY ELEMENTS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
7. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT ALL EXISTING FACILITIES AND UTILITIES AND SHALL NOT PERFORM ANY WORK THAT WILL DAMAGE OR INTERFERE WITH THEIR SERVICE.
8. THE CONTRACT DRAWINGS REPRESENT THE FINISHED STRUCTURES. THEY DO NOT INDICATE METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT EXISTING AND NEW STRUCTURES DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING, ETC, FOR ALL CONSTRUCTION PHASE LOADS.
9. DURING THE ENTIRE CONSTRUCTION PERIOD, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN CONDITIONS AT THE JOB SITE SO AS TO MEET IN ALL RESPECTS ALL APPLICABLE SAFETY LAWS, RULES, ORDINANCES AND REGULATIONS. THIS PROVISION SHALL APPLY TO ALL PERSONNEL EMPLOYED OR SUPERVISED BY THE CONTRACTOR AT THE JOB SITE.
10. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH THE 2022 EDITION OF THE CALIFORNIA BUILDING CODE.
11. "NOTICE TO THE APPLICANT/OWNER/OWNER'S AGENT/ARCHITECT OR ENGINEER OF RECORD: YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF CITY OF BURLINGAME FOR SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES."
12. "NOTICE TO THE CONTRACTOR/BUILDER/INSTALLER/SUBCONTRACTOR/OWNER-BUILDER: YOU ACKNOWLEDGE AND ARE AWARE OF, THE REQUIREMENTS CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS. YOU AGREE TO COMPLY WITH THE REQUIREMENTS OF CITY OF BURLINGAME FOR SPECIAL INSPECTIONS, STRUCTURAL OBSERVATIONS, CONSTRUCTION MATERIAL TESTING AND OFFSITE FABRICATION OF BUILDING COMPONENTS, CONTAINED IN THE STATEMENT OF SPECIAL INSPECTIONS AND, AS REQUIRED BY THE CALIFORNIA CONSTRUCTION CODES."
13. TRAFFIC CONTROL PLANS SHALL BE RESPONSIBILITY OF THE CONTRACTOR.

CONCRETE

1. ALL STRUCTURAL CONCRETE SHALL COMPLY TO MIX 650-CW-4000 PER 2021 GREENBOOK.
2. ALL REINFORCING STEEL, STRUCTURAL STEEL, AND DOWELS SHALL BE WELL-SECURED IN POSITION PRIOR TO PLACING CONCRETE.
3. PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CORNERS UNLESS OTHERWISE NOTED.

REINFORCING STEEL

1. BAR REINFORCING SHALL CONFORM TO ASTM A615, GRADE 60. WELDED BARS SHALL CONFORM TO ASTM A706.
2. MINIMUM BAR LAP SPLICE LENGTHS SHALL BE 48 BAR DIAMETERS, UNLESS OTHERWISE INDICATED.
3. ALL LAP SPLICES SHALL BE CONTACT LAP SPLICES UNLESS OTHERWISE INDICATED.
4. MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS UNLESS SHOWN OTHERWISE ON THE DRAWINGS:

CONCRETE CAST AGAINST EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH	2"
FORMED CONCRETE EXPOSED TO WEATHER	2"
ALL OTHER	AS INDICATED

5. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF ACI 315, DETAILS AND DETAILING OF CONCRETE REINFORCEMENT, UNLESS OTHERWISE NOTED.

DESIGN CRITERIA

1. GOVERNING CODE: 2012 CALIFORNIA BUILDING CODE (CBC)

EARTHQUAKE DESIGN DATA

I_e = 1.00 (RISK CATEGORY II)
S_s = 2.374g
S_1 = 0.994g
SITE CLASS D
S_{DS} = 1.583g
S_{D1} = NULL PER SECTION 11.4.8, ASCE 7-16
SEISMIC DESIGN CATEGORY: NULL PER SECTION 11.4.8, ASCE 7-16
ANALYSIS BY EQUIVALENT LATERAL FORCE PROCEDURE
R=3, Cs=0.5 NON-BUILDING STRUCTURE.

GEOTECHNICAL REPORT

SEE GEOTECHNICAL INVESTIGATION, MILLS CANYON PARK LANDSLIDE, BURLINGAME, CALIFORNIA BY MICHELUCCI & ASSOCIATES, INC. GEOTECHNICAL CONSULTANTS DATED AUGUST 5, 2023.

STATEMENT OF REQUIRED SUBMITTALS

1. CONCRETE:
   - MIX DESIGN
2. REINFORCING STEEL:
   - CERTIFIED MILL TEST REPORTS SHALL BE PROVIDED FOR EACH SHIPMENT OF REINFORCING STEEL
   - SHOP DRAWINGS

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CITY OF BURLINGAME
SAN MATEO COUNTY CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
CIVIL DETAILS

WH PROJ. NO. 140-122 CP #86780

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ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616 DATE
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SHEET 7 OF 9 SHEETS

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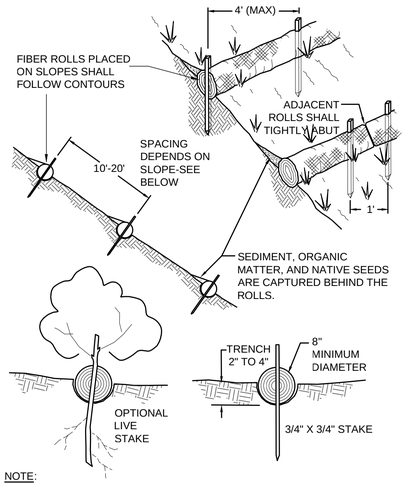
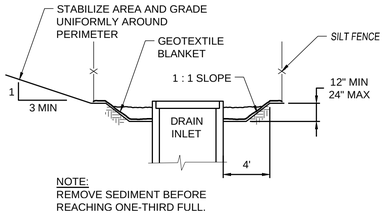


NOTE:
1. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL.

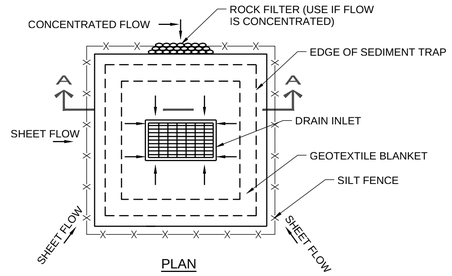
SLOPE PERCENTAGE	MAX SPACING
0-25%	20 FT
25-50%	15 FT
OVER 50%	10 FT

1 FIBER ROLL
NOT TO SCALE



NOTE:
REMOVE SEDIMENT BEFORE REACHING ONE-THIRD FULL.

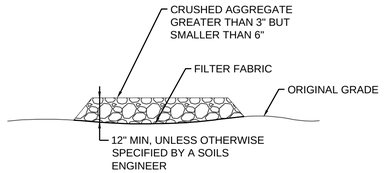
SECTION A-A



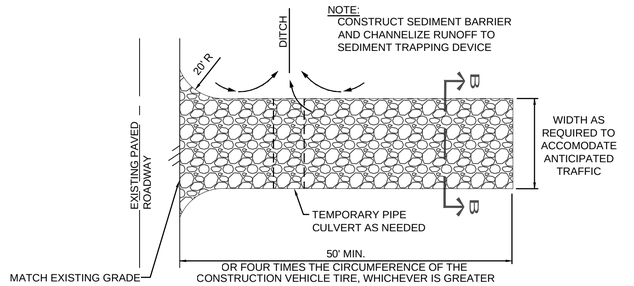
PLAN

NOTES:
1. FOR USE IN CLEARED AND GRUBBED AND IN GRADED AREA
2. SHAPE BASIN SO THAT LONGEST INFLOW AREA FACES LONGEST LENGTH OF TRAP.
3. FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.

2 INLET PROTECTION - UNPAVED AREAS
NOT TO SCALE



SECTION B-B
NTS



PLAN
NTS

3 STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

NOTES

1. TEMPORARY EROSION CONTROL DEVICES SHOWN HEREON, WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED AS THE WORK PROGRESSES TO MAINTAIN PROTECTION.
2. ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND NO LESS OFTEN THAN DAILY THEREAFTER. INSPECTOR MAY REQUIRE MORE FREQUENT CLEANING AS WEATHER CONDITIONS DICTATE.
3. EARTH BERMS SHALL BE CONSTRUCTED AND MAINTAINED ALONG THE TOP OF THE SLOPES UPON WHICH GRADING IS NOT IN PROGRESS.
4. PROVIDE VELOCITY CHECK DAMS IN ALL UNPAVED STREET AREAS AT THE LOCATIONS SHOWN. VELOCITY CHECK DAMS SHALL BE CONSTRUCTED OF GRAVEL BAGS, OR OTHER EROSION RESISTANT MATERIALS APPROVED BY THE INSPECTOR, AND BE PLACED AS SHOWN ON PLAN. EARTH DIKES SHALL NOT BE USED AS VELOCITY CHECK DAMS.
5. AFTER UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA.
6. EROSION CONTROL DEVICES SHALL BE IN PLACE AND IN WORKING ORDER ALL YEAR LONG.
7. THE SWPPP AND ALL BMP'S ARE CONDITIONAL, AND SUBJECT TO CHANGE DUE TO LOCAL CONDITIONS. THE ONSITE SUPERINTENDENT MAY AMEND THE SWPPP TO MEET THESE CONDITIONS TO PREVENT EROSION, TO CONTROL SEDIMENT, AND TO PREVENT DISCHARGE OF POLLUTANTS TO THE STORM DRAINAGE SYSTEM. PLEASE SEND PROPERLY DOCUMENTED SWPPP AMENDMENTS TO THE CITY WITHIN 5 WORKING DAYS.
8. ALL PAVED AREAS WILL BE KEPT CLEAR OF EARTHEN MATERIAL AND DEBRIS. THE SITE WILL BE MAINTAINED SO THAT SEDIMENT-LADEN RUNOFF DOES NOT ENTER THE STORM DRAINAGE SYSTEM.
9. AS STORM DRAIN IMPROVEMENTS ARE CONSTRUCTED, ALL STRUCTURES AND INLET PIPES SHALL BE PROTECTED FROM INFLOW OR SILT BY GRAVEL BAG SILT BARRIERS PER DETAILS SHOWN HEREON.
10. CONTRACTOR SHALL HAVE TOOLS, EQUIPMENT, AND MATERIALS TO PROVIDE EROSION CONTROL MEASURES MADE NECESSARY BY A CONSTRUCTION OPERATION, ON THE JOB SITE BEFORE BEGINNING THAT OPERATION.
11. ADJACENT PROPERTIES SHALL BE PROTECTED FROM STORM WATERS, MUD, SILT, ETC. AND INSPECTED ON A DAILY BASIS.
12. DUST CONTROL SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND UNTIL FINAL COMPLETION, REFER TO THE SOIL MANAGEMENT PLAN FOR DUST CONTROL MEASURES.
13. MAINTENANCE IS TO BE PERFORMED AS FOLLOWS:
    A. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED DAILY, PRIOR TO AND IMMEDIATELY AFTER EACH STORM EVENT, AND AT LEAST ONCE EVERY 24-HOURS DURING AN EXTENDED STORM EVENT. EACH INSPECTION SHALL BE DOCUMENTED, KEPT ON FILE AT THE ON-SITE CONSTRUCTION OFFICE, AND BE IMMEDIATELY AVAILABLE FOR REVIEW BY INSPECTORS.
    B. FIBER ROLLS, BERMS AND SWALES ARE TO BE INSPECTED AFTER EACH STORM AND REPAIRS MADE AS NEEDED. GRAVEL BAGS PLACED AROUND THE CURB INLETS SHALL BE INSPECTED AND REPLACED IF DAMAGED.
    C. SEDIMENT SHALL BE REMOVED & SEDIMENT TRAPS RESTORED TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO WITHIN A FOOT OF OUTLET ELEVATION.
    D. SEDIMENT REMOVED FROM TRAPS SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
    E. SEEDED AREAS SHALL BE REPAIRED, RESEEDED, AND MULCHED WITHIN 48 HOURS AFTER DAMAGE.
14. ALL DISTURBED AREAS NOT NEEDED FOR CONSTRUCTION OPERATIONS TO BE COVERED WITH JUTE NETTING OR HYDROMULCHED WITH TACKIFIED STRAW (2 TONS/ACRE) BY OCTOBER 15.
15. CONCRETE WASH AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICES DETAIL CA23.
16. ANY EARTHEN MATERIAL STOCKPILED SHALL BE STABILIZED. FIBER ROLLS SHALL BE PLACED AT THE BASE FULLY ENCLOSING THE PERIMETER OF THE STOCKPILE.
17. ALL COMPLETED GRADED AREAS SHALL BE STABILIZED UPON COMPLETION WITH STRAW WATTLES, SILT FENCE, PERMANENT LANDSCAPING, OR OTHERWISE AS SHOWN ON THE PLANS. ALL AREAS BEING ACTIVELY GRADED WILL BE PROTECTED BY PERIMETER PROTECTION CONSISTING OF STRAW WATTLES AT A MINIMUM.
18. THIS PLAN IS INTENDED TO BE USED FOR EROSION CONTROL ONLY. OTHER INFORMATION SHOWN HEREIN MAY NOT BE MOST CURRENT. SEE GRADING & IMPROVEMENT PLANS FOR OTHER INFORMATION.
19. THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO CHANGING FIELD CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ADD AND MODIFY EROSION PROTECTION TO PREVENT SILTATION FROM ENTERING THE STORM DRAIN SYSTEM. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF THE DIRECTOR OF PUBLIC WORKS/CITY ENGINEER.
20. CONTRACTOR TO EMPLOY BEST MANAGEMENT PRACTICES (BMP'S), IN ACCORDANCE WITH ASSOCIATION OF BAY AREA GOVERNMENTS (ABAG) LATEST RECOMMENDATIONS.
21. STORE, HANDLE AND DISPOSE OF CONSTRUCTION MATERIALS AND WASTES SO AS TO PREVENT THEIR ENTRY TO THE STORM DRAIN SYSTEM. CONTRACTOR MUST NOT ALLOW CONCRETE, WASH WATERS, SLURRIES, PAINT OR OTHER MATERIALS TO ENTER CATCH BASINS OR TO ENTER SITE RUNOFF.
22. USE FILTRATION OR OTHER MEASURES TO REMOVE SEDIMENTS FROM DEWATERING EFFLUENT.
23. CLEANING, OR MAINTAINING VEHICLES ON SITE SHALL NOT BE PERMITTED. CONTRACTOR SHALL NOT ALLOW DELETERIOUS MATERIALS TO ENTER CATCH BASINS OR TO ENTER SITE RUNOFF.
24. USE OF PESTICIDES AND/OR FERTILIZERS SHALL BE APPLIED AND CONTROLLED TO PREVENT POLLUTION RUNOFF.
25. PLACE ADDITIONAL WATTLES AS NECESSARY DEPENDING UPON SLOPE STEEPNESS.
26. CONTRACTOR MAY RELOCATE STORAGE, DELIVERY, OR WASH OUT AREAS TO SUIT THEIR OPERATIONS UPON APPROVAL BY THE CITY ENGINEER.
27. REFUSE, EQUIPMENT/VEHICLE, HAZARDOUS MATERIALS AND MATERIAL DELIVERY STORAGE AREAS SHALL BE SURROUNDED BY SECONDARY CONTAINMENT PER BMP CA-10 CONTAINED WITHIN THE STORM WATER POLLUTION PREVENTION PLAN FOR THIS PROJECT.
28. THIS PLAN TO BE USED IN CONJUNCTION WITH THE WRITTEN REPORT OF STORM WATER POLLUTION PREVENTION PREPARED BY WILSEY HAM.

CALL UTILITY NOTIFICATION CENTER OF CALIFORNIA
811
Know what's **below.**
Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

NO.	DATE	ISSUE / REVISION DESCRIPTION	BY
	04/04/24	ISSUE FOR BID	

Project Mgr.:	EDC	04/04/24
Project Eng.:	SM	04/04/24
Designer:	SM	04/04/24
Checked By:	EDC	04/04/24
Drawn By:	PJB	04/04/24

WILSEY HAM
Engineering, Surveying & Planning
3130 La Selva Street, Suite 100
San Mateo, CA 94403
650.349.2151
wilseyham.com

CITY OF BURLINGAME
SAN MATEO COUNTY CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
EROSION CONTROL DETAILS

WH PROJ. NO. 140-122 CP #86780

DESIGNED UNDER THE DIRECTION OF:
ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616
DATE
EXPIRES 06/30/25

DESIGN: SM	DATE:
DRAWN: SM/PJB	DATE: 04/04/2024
CHECKED: EDC	DATE:

REGISTERED PROFESSIONAL ENGINEER
ERIC D. COHEN
C 77616
04/04/2024
CIVIL
STATE OF CALIFORNIA

SHEET 8 OF 9 SHEETS

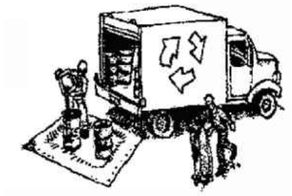
H:\140-Burlingame\140-122 Mills Canyon Landslide Repair\Engineering\Construction Drawings\8-9 EROSION CONTROL DETAILS.dwg 4-04-24 10:06:24 AM pbusinger

SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

Construction Best Management Practices (BMPs)

Construction projects are required to implement the stormwater best management practices (BMP) on this page, as they apply to your project, all year long.

Materials & Waste Management



Non-Hazardous Materials

- ❑ Berm and cover stockpiles of sand, dirt or other construction material with tarps when rain is forecast or if not actively being used within 14 days.
- ❑ Use (but don't overuse) reclaimed water for dust control.

Hazardous Materials

- ❑ Label all hazardous materials and hazardous wastes (such as pesticides, paints, thinners, solvents, fuel, oil, and antifreeze) in accordance with city, county, state and federal regulations.
- ❑ Store hazardous materials and wastes in water tight containers, store in appropriate secondary containment, and cover them at the end of every work day or during wet weather or when rain is forecast.
- ❑ Follow manufacturer's application instructions for hazardous materials and be careful not to use more than necessary. Do not apply chemicals outdoors when rain is forecast within 24 hours.
- ❑ Arrange for appropriate disposal of all hazardous wastes.

Waste Management

- ❑ Cover waste disposal containers securely with tarps at the end of every work day and during wet weather.
- ❑ Check waste disposal containers frequently for leaks and to make sure they are not overfilled. Never hose down a dumpster on the construction site.
- ❑ Clean or replace portable toilets, and inspect them frequently for leaks and spills.
- ❑ Dispose of all wastes and debris properly. Recycle materials and wastes that can be recycled (such as asphalt, concrete, aggregate base materials, wood, gyp board, pipe, etc.)
- ❑ Dispose of liquid residues from paints, thinners, solvents, glues, and cleaning fluids as hazardous waste.

Construction Entrances and Perimeter

- ❑ Establish and maintain effective perimeter controls and stabilize all construction entrances and exits to sufficiently control erosion and sediment discharges from site and tracking off site.
- ❑ Sweep or vacuum any street tracking immediately and secure sediment source to prevent further tracking. Never hose down streets to clean up tracking.

Equipment Management & Spill Control

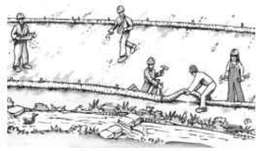
Maintenance and Parking

- ❑ Designate an area, fitted with appropriate BMPs, for vehicle and equipment parking and storage.
- ❑ Perform major maintenance, repair jobs, and vehicle and equipment washing off site.
- ❑ If refueling or vehicle maintenance must be done onsite, work in a bermed area away from storm drains and over a drip pan or drop cloths big enough to collect fluids. Recycle or dispose of fluids as hazardous waste.
- ❑ If vehicle or equipment cleaning must be done onsite, clean with water only in a bermed area that will not allow rinse water to run into gutters, streets, storm drains, or surface waters.
- ❑ Do not clean vehicle or equipment onsite using soaps, solvents, degreasers, or steam cleaning equipment.

Spill Prevention and Control

- ❑ Keep spill cleanup materials (e.g., rags, absorbents and cat litter) available at the construction site at all times.
- ❑ Inspect vehicles and equipment frequently for and repair leaks promptly. Use drip pans to catch leaks until repairs are made.
- ❑ Clean up spills or leaks immediately and dispose of cleanup materials properly.
- ❑ Do not hose down surfaces where fluids have spilled. Use dry cleanup methods (absorbent materials, cat litter, and/or rags).
- ❑ Sweep up spilled dry materials immediately. Do not try to wash them away with water, or bury them.
- ❑ Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.
- ❑ Report significant spills immediately. You are required by law to report all significant releases of hazardous materials, including oil. To report a spill: 1) Dial 911 or your local emergency response number, 2) Call the Governor's Office of Emergency Services Warning Center, (800) 852-7550 (24 hours).

Earthmoving



- ❑ Schedule grading and excavation work during dry weather.
- ❑ Stabilize all denuded areas, install and maintain temporary erosion controls (such as erosion control fabric or bonded fiber matrix) until vegetation is established.
- ❑ Remove existing vegetation only when absolutely necessary, and seed or plant vegetation for erosion control on slopes or where construction is not immediately planned.
- ❑ Prevent sediment from migrating offsite and protect storm drain inlets, gutters, ditches, and drainage courses by installing and maintaining appropriate BMPs, such as fiber rolls, silt fences, sediment basins, gravel bags, berms, etc.
- ❑ Keep excavated soil on site and transfer it to dump trucks on site, not in the streets.

Contaminated Soils

- ❑ If any of the following conditions are observed, test for contamination and contact the Regional Water Quality Control Board:
  - Unusual soil conditions, discoloration, or odor.
  - Abandoned underground tanks.
  - Abandoned wells
  - Buried barrels, debris, or trash.

Paving/Asphalt Work

- ❑ Avoid paving and seal coating in wet weather or when rain is forecast, to prevent materials that have not cured from contacting stormwater runoff.
- ❑ Cover storm drain inlets and manholes when applying seal coat, tack coat, slurry seal, fog seal, etc.
- ❑ Collect and recycle or appropriately dispose of excess abrasive gravel or sand. Do NOT sweep or wash it into gutters.
- ❑ Do not use water to wash down fresh asphalt concrete pavement.

Sawcutting & Asphalt/Concrete Removal

- ❑ Protect nearby storm drain inlets when saw cutting. Use filter fabric, catch basin inlet filters, or gravel bags to keep slurry out of the storm drain system.
- ❑ Shovel, abosorb, or vacuum saw-cut slurry and dispose of all waste as soon as you are finished in one location or at the end of each work day (whichever is sooner!).
- ❑ If sawcut slurry enters a catch basin, clean it up immediately.

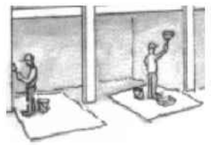
Concrete, Grout & Mortar Application

- ❑ Store concrete, grout, and mortar away from storm drains or waterways, and on pallets under cover to protect them from rain, runoff, and wind.
- ❑ Wash out concrete equipment/trucks offsite or in a designated washout area, where the water will flow into a temporary waste pit, and in a manner that will prevent leaching into the underlying soil or onto surrounding areas. Let concrete harden and dispose of as garbage.
- ❑ When washing exposed aggregate, prevent washwater from entering storm drains. Block any inlets and vacuum gutters, hose washwater onto dirt areas, or drain onto a bermed surface to be pumped and disposed of properly.

Landscaping

- ❑ Protect stockpiled landscaping materials from wind and rain by storing them under tarps all year-round.
- ❑ Stack bagged material on pallets and under cover.
- ❑ Discontinue application of any erodible landscape material within 2 days before a forecast rain event or during wet weather.

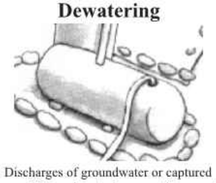
Painting & Paint Removal



Painting Cleanup and Removal

- ❑ Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- ❑ For water-based paints, paint out brushes to the extent possible, and rinse into a drain that goes to the sanitary sewer. Never pour paint down a storm drain.
- ❑ For oil-based paints, paint out brushes to the extent possible and clean with thinner or solvent in a proper container. Filter and reuse thinners and solvents. Dispose of excess liquids as hazardous waste.
- ❑ Paint chips and dust from non-hazardous dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash.
- ❑ Chemical paint stripping residue and chips and dust from marine paints or paints containing lead, mercury, or tributyltin must be disposed of as hazardous waste. Lead based paint removal requires a state-certified contractor.

Dewatering



- ❑ Discharges of groundwater or captured runoff from dewatering operations must be properly managed and disposed. When possible send dewatering discharge to landscaped area or sanitary sewer. If discharging to the sanitary sewer call your local wastewater treatment plant.
- ❑ Divert run-on water from offsite away from all disturbed areas.
- ❑ When dewatering, notify and obtain approval from the local municipality before discharging water to a street gutter or storm drain. Filtration or diversion through a basin, tank, or sediment trap may be required.
- ❑ In areas of known or suspected contamination, call your local agency to determine whether the ground water must be tested. Pumped groundwater may need to be collected and hauled off-site for treatment and proper disposal.

Storm drain polluters may be liable for fines of up to $10,000 per day!

CALL UTILITY NOTIFICATION CENTER OF CALIFORNIA
811
Know what's **below.**
Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

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Project Mgr.:	EDC	04/04/24
Project Eng.:	SM	04/04/24
Designer:	SM	04/04/24
Checked By:	EDC	04/04/24
Drawn By:	PJB	04/04/24

WILSEY HAM
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3130 La Selva Street, Suite 100
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650.349.2151
wilseyham.com

CITY OF BURLINGAME
SAN MATEO COUNTY CALIFORNIA

MILLS CANYON
LANDSLIDE REPAIR
EROSION CONTROL DETAILS

WH PROJ. NO. 140-122 CP #86780

DESIGNED UNDER THE DIRECTION OF:
ERIC D. COHEN
WILSEY HAM
R.C.E. NO. 77616 DATE EXPIRES 06/30/25

DESIGN: SM DATE:
DRAWN: SM/PJB DATE: 04/04/2024
CHECKED: EDC DATE:

REGISTERED PROFESSIONAL ENGINEER
ERIC D. COHEN
C 77616
04/04/2024
CIVIL
STATE OF CALIFORNIA

SHEET 9 OF 9 SHEETS

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GEOTECHNICAL INVESTIGATION

Mills Canyon Park Landslide
Burlingame, California

Prepared for:

Burlingame Park and Recreation Department
Ms. Margaret Glomstad

August 5, 2023

Michelucci & Associates, Inc.
Geotechnical Consultants

Joseph Michelucci, G.E.
joe@michelucci.com

Richard Quarry
rich@michelucci.com

August 5, 2023
Job No. 23-5131

via e-mail: mglomstad@burlingame.org

Ms, Margaret Glomstad
Parks and Recreation Director
850 Burlingame Avenue I Burlingame, CA 94010

Re: Geotechnical Investigation
Mills Canyon Park Landslide
Burlingame, California

Dear Ms. Glomstad:

As authorized, we have completed a geotechnical investigation at the site of the landslide that has affected the slope beyond 2943 and 2839 Arguello Drive, within Mills Canyon Park in Burlingame, California.

It is our basic conclusion that the stabilization of the affected area is feasible from a geotechnical viewpoint, provided that the recommendations contained in the accompanying report are incorporated into the final plans and followed during construction.

We are pleased to have been of service to you on this project, and will be available to review our findings with you and your other consultants as needed.

Very truly yours,
MICHELUCCI & ASSOCIATES, INC.

John Petroff
Project Geologist

Joseph Michelucci
Geotechnical Engineer #593
(Expires 3/31/25)

REGISTERED PROFESSIONAL ENGINEER
JOSEPH M. MICHELUCCI
No. GE 000593
Exp. 3/31/25
GEOTECHNICAL
STATE OF CALIFORNIA

cc: Richard J. Holtz (rholtz@burlingame.org)

TABLE OF CONTENTS

GEOTECHNICAL ENGINEERING INVESTIGATION

Mills Canyon Park Landslide
Burlingame, California

INTRODUCTION

This report covers our investigation of the soil conditions that occur at the site of the landslide that has affected the slope beyond 2843 and 2839 Arguello Drive, within the Mills Canyon Park in Burlingame, California (Site Vicinity Map, Figure 1). An overview of the affected area, including the location of test borings performed in conjunction with this study, is included on the attached Site Plan, Figure 2.

The purpose of our study was to evaluate the soil conditions that occur at the site of the landslide, and to provide geotechnical recommendations and design criteria pertaining to possible stabilization alternatives, which could include site grading, buried or above grade retaining walls, drainage, subdrainage and other items that relate to the site soil and geologic conditions. Our recommendations could be used by civil and/or structural engineers during the preparation of plans.

DESCRIPTION OF PROJECT

The project is to involve stabilization (or protection of uphill properties) of a portion of the parklands that was affected by a landslide that occurred during the past very wet rainy season. The slide is located on the Mills Canyon Park grounds on the slope just beyond the rear-yard areas of 2843 and 2839 Arguello Drive. The location of the landslide is shown on the attached Figures 1 and 2.

SCOPE OF SERVICES

Our study included:

1. Detailed site inspections by our geotechnical personnel;

2. A review of our files for other projects our firm has completed in the site vicinity;

3. The review of a soil report prepared for 2843 Arguello Drive, prepared by Bay Area Geotechnical Group (BAGG), dated May 26, 1988, titled, "Geotechnical Investigation, Proposed Retaining Wall, Armanino Residence," and the associated retaining wall design plans, prepared by SOH&A, with a latest revision date of January, 9, 1988, titled, "Slope Protection For: Armanino Residence," and also a plan prepared by Kavanagh Engineering, for the City of Burlingame, with a latest revision date June 26, 1985, titled, "Arguello Landslide Mitigation Plan";

4. Discussions with Margaret Glomstad and Richard Holtz with the Burlingame Parks Division;

5. A review of available published geologic maps and literature;

6. Marking the street and sidewalk in front of the property and then contacting USA (Utility Service Alert) to locate where buried utilities enter the property prior to logging test borings;

7. Filing the appropriate forms with San Mateo County in accordance with our Annual Drilling Permit, as required by the County Department of Health;

8. Logging the excavation of three exploratory test borings that were advanced by continuous sampling of the subsurface soil materials;

9. The recovery of samples from the borings, and the performance of a variety of engineering tests upon the various soil layers encountered;

10. Backfilling the boreholes with appropriate grout (by Access Soil Drilling of San Mateo);

11. The performance of geotechnical engineering analysis utilizing the above items; and,

12. The preparation of this report.

FIELD INVESTIGATION AND LABORATORY TESTS

In order to evaluate the geotechnical engineering characteristics of the soil layers which underlie the slide-affected area, four borings were advanced at the approximate locations indicated on the attached Site Plan, Figure 2. The borings were advanced by Access Soil Drilling of San Mateo on May 22, 2023, by continuous sampling of the subsurface soil materials. Relatively undisturbed samples were recovered in thin brass tubes from the borings at selected intervals with a free-falling, 140-pound hammer (with a 30-inch drop) advancing modified California, and in some cases standard penetration, drive samplers up to 24 inches into the subsurface soil layers. The brass tube encased samples were labeled in the field and carefully sealed to preserve their in-situ moisture content. They were ultimately transported to our laboratory.

As the borings were excavated, logs of the materials encountered were prepared based upon an inspection of the recovered samples as they emerged from each borehole. The final Boring Logs, as presented on the attached Figures 3 through 6, are based upon the field logs with occasional modifications based upon further close laboratory examinations of the recovered samples as well as the laboratory test results.

Laboratory tests were performed upon samples that were extruded from the brass tubes. These tests, which are useful in evaluation of the general strength properties of the materials tested, included the determinations of moisture content, dry density and unconfined compressive strength (in accordance with ASTM D2166) of selected samples. The results of these tests, along with the resistance to penetration of the sampler, are listed opposite the corresponding sample location on the final Boring Logs, Figures 3 through 6. A Boring Log Key is also included as Figure 7.

We also performed plastic index testing (in accordance with ASTM D4318) upon a representative sample of the slide debris that were encountered in Boring 3. The results of this type of test are useful in evaluating the shrink/swell potential and other properties of the material and are included on Figure 9.

SITE CONDITIONS

Mills Canyon Park is located behind private properties on the southeast side of Arguello Drive in Burlingame, California. The park is shown on the attached Site Vicinity Map, Figure 1.

The slide affected the parkland slope beyond the rears of 2839 and 2843 Arguello Drive, as shown on the attached site plan, Figure 2. Our observations suggest that the head-scarp of the slide has not migrated onto the above-specified private properties, and that the affected area is currently confined to the parkland. The slide area is located on the northwest side of the Ed Taylor Trail, and it occurred during the extraordinarily wet winter season of 2022-2023. Several photos of the slide area as it appeared on May 11, 2023, follow.

Photo 1: View towards the north of the affected slope along the rears of 2839 and 2843 Arguello Drive as it appeared after tarps were removed several days before the photo was taken.

Photo 2: View towards the east from the wooden porch behind 2843 Arguello of the slide area.

Photo 3: View towards the northeast of the top (head-scarp area) of the affected portion of the slope.

The slide area measures about 90 feet in maximum length from the head-scarp to toe and about 60 feet in maximum width. The southwest portion of the slide area appears to be a detachment block that has moved down the slope, as shown on Figure 2.

We did observe that there were steel I-Beam and wood lagging retaining walls along the rears of 2839 and 2843 Arguello Drive above the landslide area. We understand from conversations with the owner of 2843 Arguello, the wall along the rear of the property was constructed more than 35 years ago and that there are also tiebacks that extend into the slope from the retaining wall. We also reviewed the design plans for the wall behind 2843 Arguello Drive. We also understand that the City cleared the affected area of several accacia trees (possibly 10 years ago), cuttung the trees down and leaving the stumps in the ground. The wall behind 2839 Arguello is visible in the following photo.

Photo 4: View towards the northwest of the slide area from the toe of the slide. Note that the steel I-Beam and wood lagging retaining wall behind 2839 Arguello Drive (design plans not reviewed) is visible below the fence and to the left of the white concrete retaining wall.

The wall behind 2843 Arguello Drive that was documented on the plans we reviewed by SOH&A is visible in the following photo.

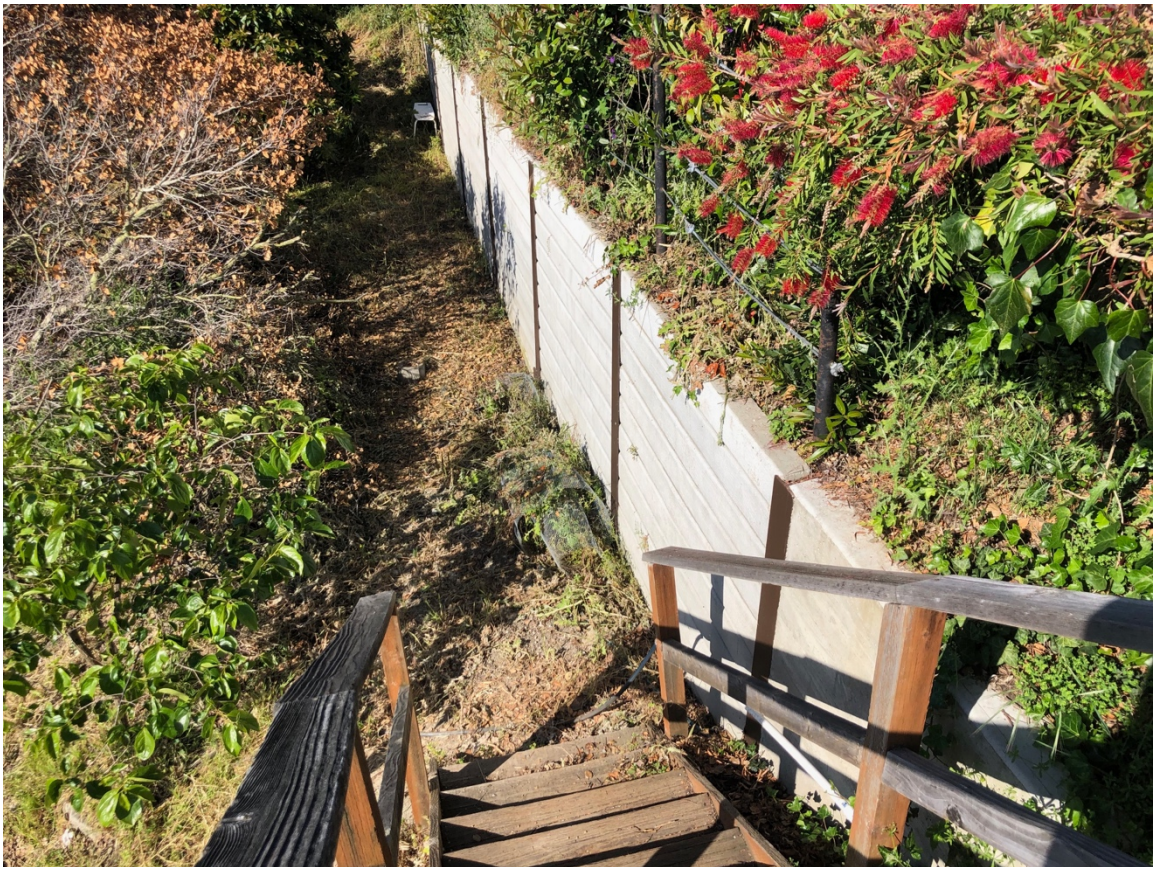


Photo 5: View towards the southwest of the I-Beam retaining wall along the rear of 2843 Arguello Drive that we understand was constructed over 35 years ago and also contains tie-backs that extend into the slope.

SOIL AND BEDROCK CONDITIONS

In order to evaluate the soil and bedrock conditions in the area of the landslide, four borings were advanced at the approximate locations shown on the attached Figure 2. Boring 1 was advanced near the bottom of the slide, Boring 2 in the middle of the slide and Borings 3 and 4 near the top of the slide.

In Boring 1, about 3 feet of slide debris was encountered from the ground surface. The slide debris in this boring consisted of soft fine sandy clay with scattered pebbles that was very moist to wet at the bottom of the slide debris at 3 feet below grade. The slide debris was underlain by material we are interpreting as native soil, consisting of medium stiff to stiff fine sandy clay with scattered pebbles. The native soil was underlain by residual soil (soil that results from the in-place weathering of the underlying bedrock material) that consisted of stiff to very stiff silty to fine sandy clay with pebbles.

About 5-1/2 feet of slide debris was encountered from the ground surface in Boring 2. The slide debris in this boring consisted of soft silty fine sandy clay with rock fragments that was wet near where we are interpreting the slide plane occurs at 5-1/2 feet below grade. The slide debris in Boring 2 was underlain by material we are interpreting as man-placed probable engineered fill that consisted of firm fine sandy clay with some sandy lenses and pebbles. The slide debris in Boring 2 was underlain by native soil consisting of silty clay with scattered rock fragments.

The slide debris encountered from the ground surface in Boring 3 extended to a depth of 7 feet below grade and consisted of soft silty fine sandy clay to clayey fine to medium sand with rock fragments. The slide debris was wet at the interpreted slide plane at a depth of 7 feet below grade. The slide debris was underlain by artificial fill that consisted of firm to stiff fine sandy clay with a zone of clayey silty fine sand between 9 and 12-1/2 feet below grade. The fill extended to the depth explored of 20 feet below grade.

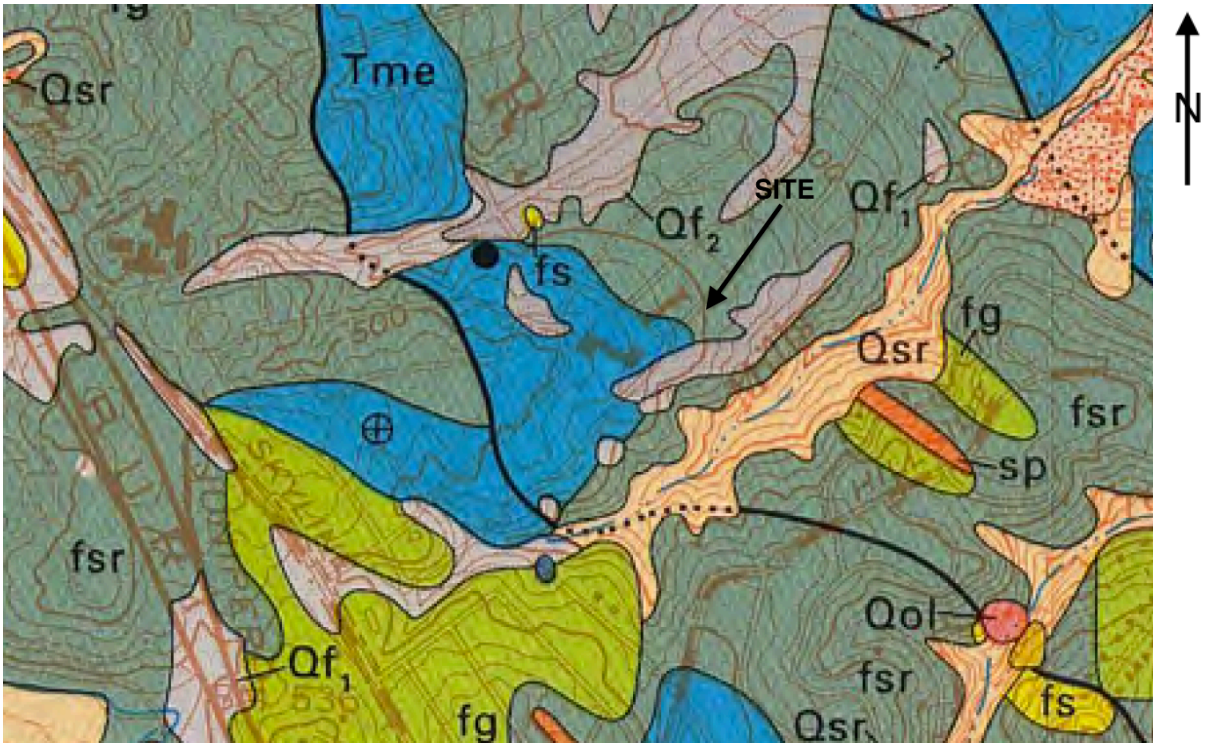
Boring 4, encountered about 7 feet of soft silty fine sandy clayey slide debris that was wet at the slide plane. Artificial fill was encountered beneath the slide debris consisting of firm silty clayey fine sand to fine sandy silt with rock fragments, grading more clayey at a depth of 15 feet below grade. Boring 4 was terminated at a depth of 16 feet below grade

Seepage was encountered near the slide plane in Boring 3 at a depth of 6 feet below grade and at a depth of 6 feet below grade in Boring 4 at the time of drilling. Boring 4 was noted to be dry when checked about a half an hour after completion of the drilling. Borings 1 and 2 remained dry at the time of drilling and when monitored after completion of the drilling. Groundwater and perched groundwater levels, however, do tend to fluctuate seasonally, and groundwater could rise to the depths explored in the future.

A survey of the slide-affected area is included on the attached Site Plan, Figure 2. For a more complete description of the soil and bedrock layers encountered in the borings, refer to the final Boring Logs included as Figures 3 through 6 and the Boring Log Key included as Figure 7. We have also included a typical profile as the attached Figure 8 with our interpretation of the subsurface soil conditions underlying the slide-affected area

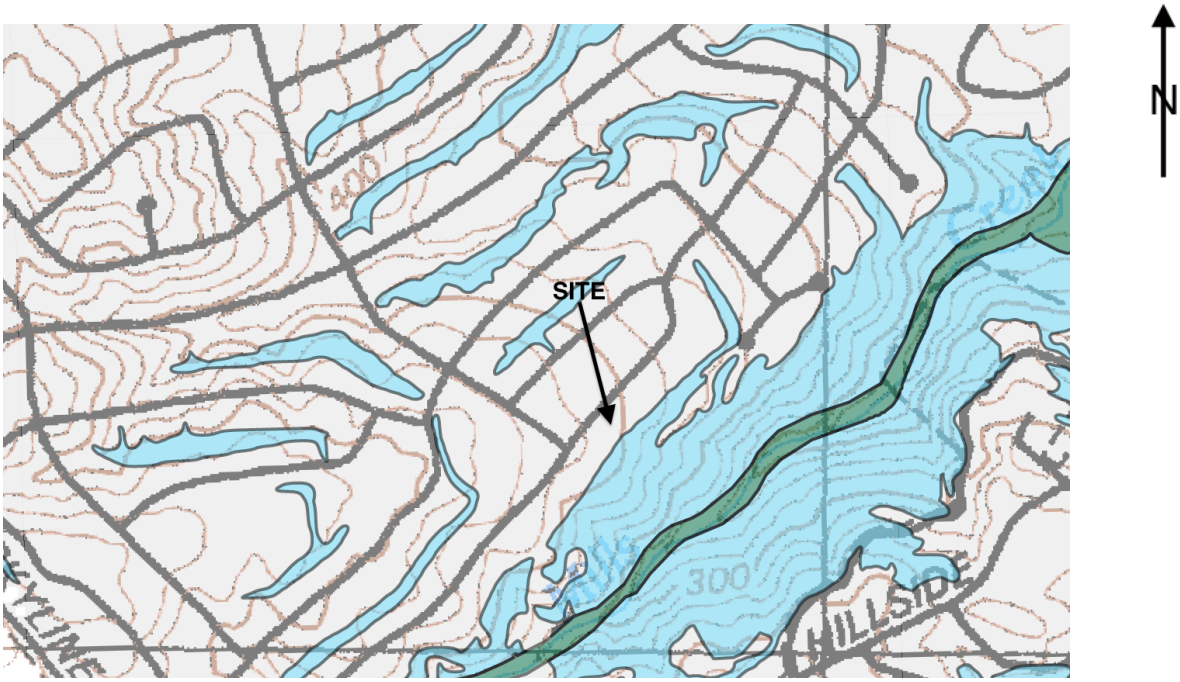
SITE GEOLOGY

The site has been mapped by Brabb, Graymer and Jones (1998) and Pampeyan (1994) to be underlain by Franciscan sheared bedrock (fsr). Pampeyan describes the bedrock material as *predominantly soft, light- to dark-gray, sheared shale, siltstone, and greywacke containing various-size tectonic inclusions of Franciscan rock types*. We encountered residual soil at a depth of 10 feet below grade beneath the slide debris and in-situ native soil near the bottom of Boring 1 that suggested that Franciscan sheared bedrock underlies the man-placed fill in the area of the landslide. A scan of the relevant portion of Pampeyan's 1994 geologic map showing the site area follows.



Map 1: Pampeyan (1994)

The State of California has issued a set of seismic hazard zone maps as part of the Seismic Hazards Mapping Act. The bluish-green areas correspond to areas where seismic induced liquefaction could occur, and the light blue areas correspond to areas where seismic induced landsliding could occur. The official map of the Montara Mountain Quadrangle (released April 4, 2019) indicates that all or a portion of the subject property is mapped in an area that could potentilly be sffected by seismic-induced landsliding and/or liquefaction. A scan of the relevant portion of the State's seismic hazards map follows.



Map 2: Montara Mountain Quadrangle (2019)

As can be seen on Map 2, the mapped potential liquefaction zone is shown in the area of a stream channel that drains from southwest towards the northeast in the middle of the park area. Liquefaction that results from strong seismic ground motions is limited from a practical standpoint to loose saturated sands, loose silty sands, non-cohesive silts, and gravels, soil that could occur in the banks of the stream channel. Unsaturated soils, dense sandy soils and clays are essentially not liquefiable. For these reasons, we conclude that the thin clayey surface soil and bedrock material encountered in our borings above the creek channel to the northeast are stiff/dense enough and are unlikely to liquefy.

The landslide that is the subject of this report occurred this past winter due to the unprecidented amounts of heavy precipitation over extended periods of time repeatedly throughout the winter. Allthough not seismically induced, the subject landslide resulted from rainfall, the steepness of the slope prior to the slide and the lack of dense vegetation (trees, bushes, etc...) having taken root in the slope.

There are no indications of active faulting at the site. The closest mapped active fault to the site is the San Andreas Fault located approximately 0.8 miles (1.3 kilometers) to the southwest. The San Andreas Fault, and numerous active and potentially active Bay Area faults are capable of producing moderate to major earthquakes that could cause severe ground shaking at the subject site in the future. This hazard is shared in some degree by all land and structures in the San Francisco Bay Area.

CONCLUSIONS AND DISCUSSION

We considered two options for stabilizing the landslide and/or the protecting residential properties that adjoin the Park near the landslide headscarp. These two options are discussed in the following paragraphs.

The first option would be to repair the landslide, and stabilize the hillside by converting the landslide into a drained engineered fill. The repair would entail excavating all the landslide soils, installing subsurface drains and constructing a compacted engineered fill into the excavation. The excavated soils could be reused as engineered fill. The excavation would be made deep enough to expose stable materials, ideally stiff residual soil and/or bedrock, to provide a stable foundation for the engineered fill. The fill would be placed upon level keys and benches excavated into the stable materials. Because of the steep hillside inclination, layers of geogrid would have to be installed into the fill at prescribed vertical intervals in order to reinforce the fill.

The second option would be to construct a subterranean retaining structure on a line roughly parallel to and near the common property line between the Park and the adjoining unprotected residential properties. The wall would consist of a line of deep large diameter, cast in place reinforced concrete piers installed at the base of the landslide scarp. The piers would be made large and deep enough to act a barrier, preventing enlargement of the landslide into the properties (this option is similar in concept to the wall that was built at the rear of the 2843 Arguello Drive property line in 1988). A conventional retaining wall would be found on the piers, to support the steep landslide scarp.

The engineered fill option has the advantage in that the fill would both restore the hillside to a stable condition and also prevent enlargement of the landslide into the adjoining properties. The retaining structure option would protect the adjoining properties and remove the risk of landslide enlargement into the properties, but would not prevent future movements of the landslide, similar to those that have happened. If these movements were to occur, they would be limited to the Park hillside.

As noted, the landslide soils could be re-used in the repair fill, converted to strong engineered fill. However, we believe that the construction of a fill repair would require a larger volume of soil than is available in the landslide, and that additional soil would have to be imported to the site. Thus, there would have to be access through the Park for trucks or other conveyances to bring the additional volume of soil to the site, and for the heavy earth moving equipment.

In addition, the we estimate that the excavation necessary to reach stable soil and/or rock would be quite deep, increasing the volume (and cost) of engineered fill. A deep, although temporary excavation would run the risk of undermining the adjoining properties.

In view of the forgoing, we conclude that the engineered fill option is probably not feasible, and recommend the retaining structure option. Recommendations for the retaining structure design are given in following paragraphs.

RECOMMENDATIONS

The following recommendations are contingent upon our firm being retained to review the final civil and/or structural engineering plans and to observe the geotechnical aspects of construction. We should also be provided the opportunity to "fine-tune" our recommendations as plans are being prepared. Supplemental recommendations may also be necessary based upon conditions exposed during construction.

A. Seismic Criteria Per CBC

It is our opinion that the subject site can be classified as Site Class "D" for the purpose of structural engineering calculations as defined in Chapter 20 found in ASCE 7-16.

It is important that the structural engineer verify the coefficients indicated on the following seismic criteria data sheet.

Mills Canyon Park

Print

Mills Canyon Park, 2930 Adeline Dr, Burlingame, CA 94010, USA
Latitude, Longitude: 37.5799068, -122.3907818

Date	7/25/2023, 3:37:08 PM
Design Code Reference Document	ASCE7-16
Risk Category	II
Site Class	D - Stiff Soil

Type	Value	Description
S_S	2.374	MCE_R ground motion. (for 0.2 second period)
S_1	0.994	MCE_R ground motion. (for 1.0s period)
S_{MS}	2.374	Site-modified spectral acceleration value
S_{M1}	null -See Section 11.4.8	Site-modified spectral acceleration value
S_{DS}	1.583	Numeric seismic design value at 0.2 second SA
S_{D1}	null -See Section 11.4.8	Numeric seismic design value at 1.0 second SA

Type	Value	Description
SDC	null -See Section 11.4.8	Seismic design category
F_a	1	Site amplification factor at 0.2 second
F_v	null -See Section 11.4.8	Site amplification factor at 1.0 second
PGA	1.015	MCE_G peak ground acceleration
F_{PGA}	1.1	Site amplification factor at PGA
PGA_M	1.116	Site modified peak ground acceleration
T_L	12	Long-period transition period in seconds
SsRT	2.654	Probabilistic risk-targeted ground motion. (0.2 second)
SsUH	3	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration
SsD	2.374	Factored deterministic acceleration value. (0.2 second)
S1RT	1.122	Probabilistic risk-targeted ground motion. (1.0 second)
S1UH	1.288	Factored uniform-hazard (2% probability of exceedance in 50 years) spectral acceleration.
S1D	0.994	Factored deterministic acceleration value. (1.0 second)
PGAd	1.015	Factored deterministic acceleration value. (Peak Ground Acceleration)
PGA_{UH}	1.2	Uniform-hazard (2% probability of exceedance in 50 years) Peak Ground Acceleration
C_{RS}	0.885	Mapped value of the risk coefficient at short periods
C_{R1}	0.872	Mapped value of the risk coefficient at a period of 1 s
C_V	1.5	Vertical coefficient

Seismic Design Criteria: Presented at https://siesmicmaps.org (OSHPD 2023)

B. Retaining Structure Foundations

We recommend that the retaining structure be comprised of a line of drilled, cast in place reinforced concrete piers. The piers should be on the order of 30 inches in diameter, and should be spaced no further than three pier diameters apart, measured center to center.

The proposed retaining structure location is shown on Figure 10. We anticipate that construction of the retaining structure will require grading a temporary level bench at the retaining structure location to provide space for equipment movement and storage.

Geotechnical design criteria for the piers is illustrated on Figure 11. We recommend that the piers be designed to resist a force equal to 11 kips per lineal foot on the piers. Thus, for example, 30-inch diameter piers, spaced at three pier diameters, should be designed to resist a total force of 82.5 kips. The force should be applied to the tops of the piers, as shown on Figure 11. The piers should be extended to a minimum of 35 feet deep, or as determined by our firm in the field when pier shafts are being drilled, regardless of the depth calculated from the criteria on Figure 11.

Figure 11 includes a note for possibly connecting the piers to anchors ("tie backs") that would extend to depths beneath the adjoining properties (similar to those existing anchors beneath 2843 Arguello Drive). However, from the geotechnical engineering standpoint, we judge that piers designed as recommended herein will be an adequate barrier without having to be anchored; therefore, anchors should only be required if the structural design bending moments in the piers become too large without them.

Design details for anchors are not given herein, on the basis that our expectation that anchors will not be required, i.e. that 30-inch diameter piers will be capable of resisting the shear and bending moments determined from the criteria shown on Figure 11, without the additional assistance provided by anchors. Our office should be consulted for anchor design details if this proves to not be the case.

We recommend constructing a conventional retaining wall founded on the piers, as illustrated schematically on Figure 10. The top of the wall should be at the same elevation of the adjoining property lines.

The conventional retaining wall should be designed to resist lateral pressures equal to 35 psf per foot of depth. The shears and bending moments imposed on the top of the piers by the lateral pressures on the conventional retaining wall should be added to the shears and bending moments determined from criteria on Figure 11.

The piers will resist the conventional retaining wall vertical loads through skin friction between the sides of the piers and the soils below a depth of 6 feet from the tops of the piers. The allowable skin friction can be taken as 500 psf. The upper 6 feet of possible support for the piers should be disregarded. The passive pressures shown on Figure 11 are allowable values.

A subsurface drain should be installed behind the conventional retaining wall. A typical drain detail is shown on Figure 12.

The space between the drain materials and the landslide scarp behind the conventional retaining wall should be backfilled with engineered fill. We define engineered fill as soil placed in thin layers, moistened or dried to allow for adequate compaction and compacted to a minimum degree of compaction of 90 per cent, based on the ASTM standard D1557, latest revision. On site soils (e.g. spoils from the pier shaft drilling work) can be used for this purpose. Alternatively, the entire volume behind the conventional retaining wall can be backfilled with the drain materials specifided on Figure 12.

C. Review of Plans and Construction Observations

It is important that all of the plans related to our recommendations be submitted to our office for review. The purpose of our review will be to verify that our recommendations are understood and reflected on the plans, and to allow us to provide supplemental recommendations, if necessary. We should be provided the plans well in advance of construction. We will provide plan review letters as appropriate.

It is important that our firm be retained to provide observation and testing services during construction. Our observations and tests will allow us to verify that the materials encountered are consistent with those found during our study, and will allow us to provide supplemental, on-site recommendations, as necessary.

We will require at least 72 hour's notice so that the appropriate personnel may be scheduled. If we are not called to the site prior to the completion of items that require our observation or testing, our recommendations should be considered voided.

LIMITATIONS

The conclusions and opinions expressed in this report are based upon the exploratory borings that were drilled on the site, spaced as shown on the Site Plan, Figure 2. While in our opinion these borings adequately disclose the soil conditions across the site, the possibility exists that abnormalities or changes in the soil conditions, which were not discovered by this investigation, could occur between borings.

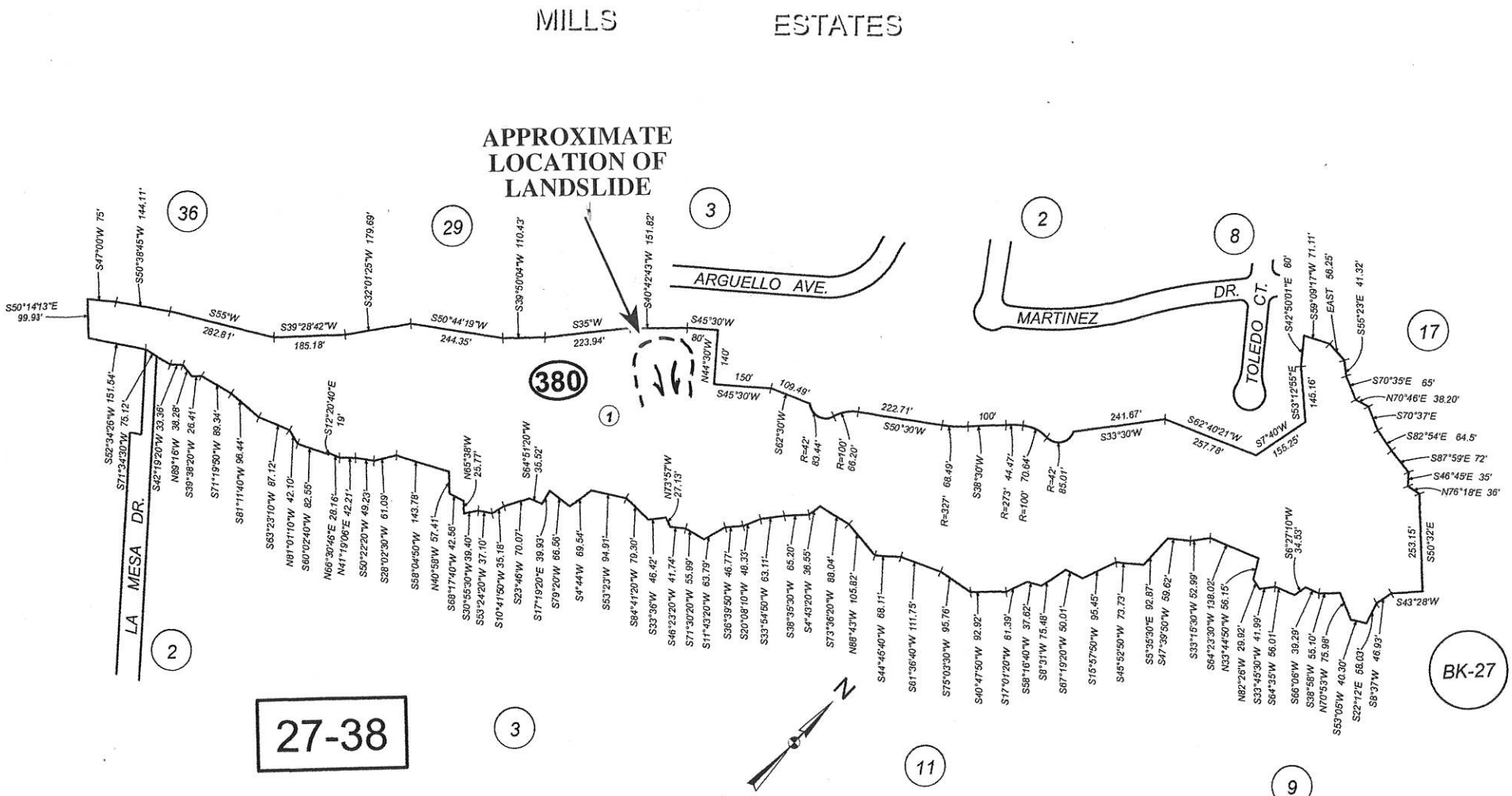
This study was not intended to disclose the locations of any existing utilities, septic tanks, leaching fields, hazardous wastes, or other buried structures. The contractor or other people should locate these items, if necessary.

The passage of time may result in significant changes in technology, economic conditions, extraordinary weather events, global warming, sea level rises, or site variations that could render this report inaccurate. Accordingly, neither the City of Burlingame nor any other party shall rely on the information or conclusions contained in this report after 12 months from its date of issuance without the express written consent of Michelucci & Associates, Inc. Reliance on this report after such period of time shall be at the user's sole risk. Should Michelucci & Associates, Inc. be required to review the report after 12 months from its date of issuance, Michelucci & Associates, Inc. shall be entitled to additional compensation at then-existing rates or such other terms as may be agreed upon between Michelucci & Associates, Inc. and the City of Burlingame.

This report was prepared to provide engineering opinions and recommendations only. It should not be construed to be any type of guarantee or insurance.

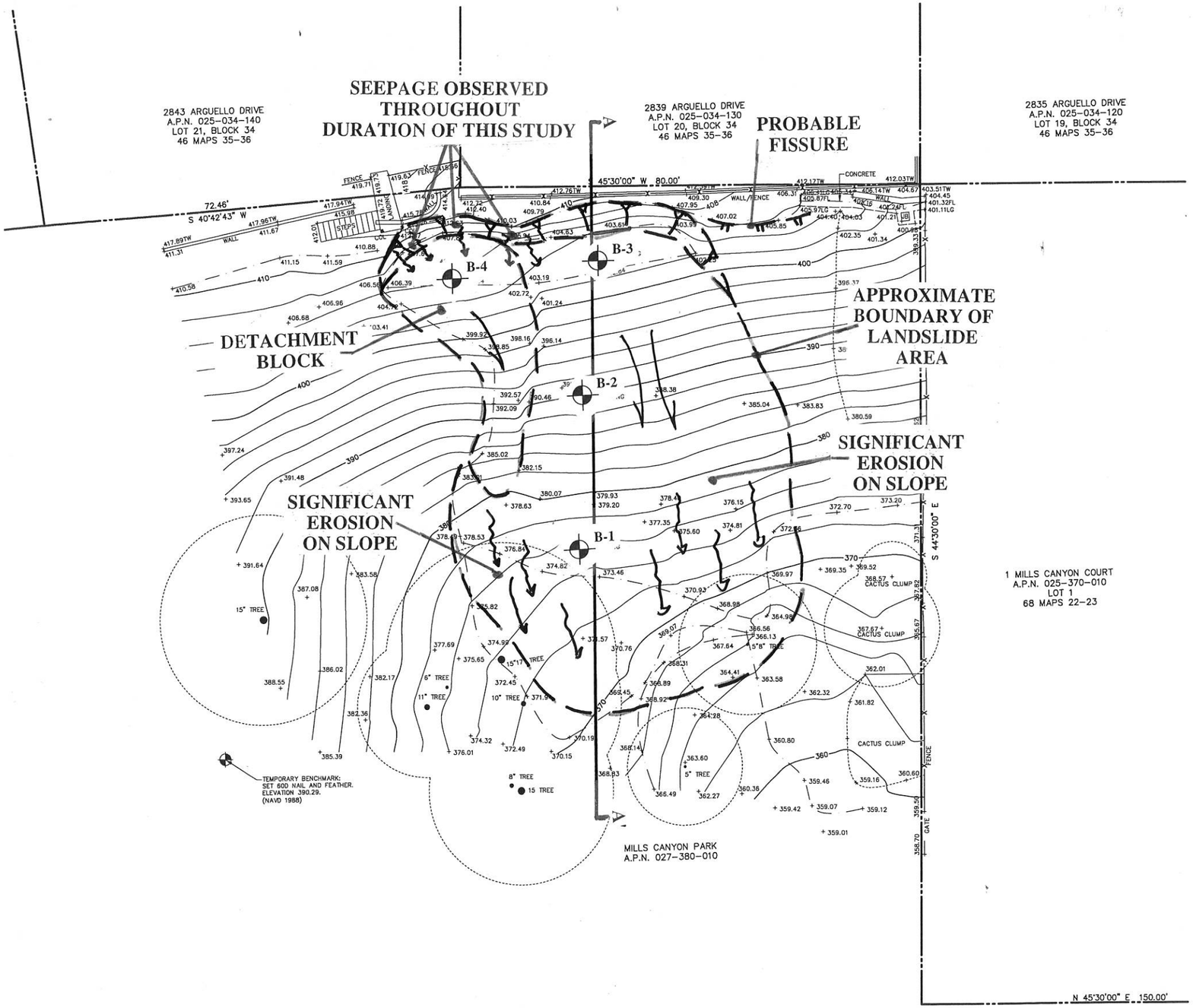
SITE VICINITY MAP*

Burlingame Parks & Recreation Department
Mills Canyon Park
Burlingame, California
SCALE: 1" = 400'±



* Base map from an assessors parcel map obtained online from the San Mateo County Assessors website, Sheet 27-38, undated.

Job No. **23-5131**	Michelucci & Associates, Inc.	Figure **1**



EXPLANATION

B-1 — Boring Location & Number (Michelucci & Associates, Inc.)

A — A' — Typical Profile (Figure 8)

Landslide Boundary

UTILITY NOTE:

THE UTILITIES EXISTING ON THE SURFACE AND SHOWN ON THIS DRAWING HAVE BEEN LOCATED BY FIELD SURVEY. UNDERGROUND UTILITIES ARE NOT SHOWN ON THIS DRAWING.

FLOOD ZONE NOTE:

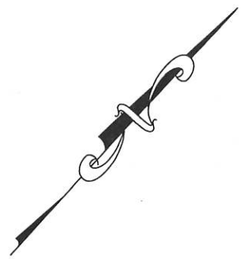
THE SUBJECT PROPERTY LIES ENTIRELY WITHIN FLOOD ZONE "X", BASED ON FLOOD INSURANCE RATE MAP 06081C0134F, DATED APRIL 5, 2019.

EASEMENT NOTE:

EASEMENTS, IF ANY, ARE NOT INDICATED HEREON.

LEGEND

	PROPERTY LINE
FL	FLOWLINE
JB	JUNCTION BOX
LG	LIP OF GUTTER
TW	TOP OF WALL
●12" TREE	TREE W/ SIZE
-X-X-	FENCE



* Base map from a topographic survey of the site prepared by Dains Land Surveying, dated June 9, 2023.

SITE PLAN*

Burlingame Parks & Recreation Department
Mills Canyon Park
Burlingame, California

Scale: 1"=20'±	Approved: J. M..	Prepared By: J. P.
Date: 7-5-23		Revised:

Michelucci & Associates, Inc.

Job No. 23-5131		Figure 2

Project: **Mills Canyon Park** Project Location: **Burlingame, California** Project Number: **23-5131**	Log of Boring 1 **Sheet 1 of 1**

Date(s) Drilled **May 22, 2023**	Logged By **SF**	Checked By **JM + JP**
Drilling Method **Continuous Sampling**	Drill Bit Size/Type **4" +/- Diameter**	Total Depth of Borehole **12' 6"**
Drill Rig Type **Minuteman**	Drilling Contractor **Access Soil Drilling**	Approximate Surface Elevation
Groundwater Level and Date Measured **Dry**	Sampling Method(s) **2.5", 2.0", spt**	Hammer Data **140 lb: 30" drop**
Borehole Backfill		

Depth (feet)	Graphic Log	Material Type	MATERIAL DESCRIPTION	Sample Type	Sample Number	Driving Resistance, blows/ft	Normalization to SPT	Dry Unit Weight, pcf	Water Content, %	UC, psf	PI, %	Deg. of Saturation (%)
0		CL	Soft, yellowish brown to olive brown, fine sandy clay with slide debris, damp to very moist (Slide Debris)		1-1 (2.5")	8	5		21.0			
		CL	Firm to stiff, very dark grayish brown, fine sandy silty clay with strong brown mottling and scattered rock fragments/pebbles, moist (Native Soil)		1-2 (2.5")	18	11	100.3	10.3			41.0
5					1-3 (2.0")	21	16	110.4	18.2	767		93.4
					1-4 (2.0")	44	33	113.1	16.9	1553		93.6
					1-5 (spt)	26	26					
10		CL	Stiff to very stiff, strong brown, silty to fine sandy clay with yellowish brown mottling and pebbles, moist (Residual Soil)		1-6 (spt)	41	41					
			Boring terminated at 12' 6"									
15												
20												

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Macintosh HD:Users:user 1:Desktop:Unfinished Boring Logs:Mill Canyon Park (Arguello).bg4[Company (with PI).tpl]

Figure 3

Project: **Mills Canyon Park** Project Location: **Burlingame, California** Project Number: **23-5131**	Log of Boring 2 **Sheet 1 of 1**

Date(s) Drilled **May 22, 2023**	Logged By **SF**	Checked By **JM + JP**
Drilling Method **Continuous Sampling**	Drill Bit Size/Type **4" +/- Diameter**	Total Depth of Borehole **18'**
Drill Rig Type **Minuteman**	Drilling Contractor **Access Soil Drilling**	Approximate Surface Elevation
Groundwater Level and Date Measured **Dry**	Sampling Method(s) **2.5", 2.0", spt**	Hammer Data **140 lb: 30" drop**
Borehole Backfill		

Depth (feet)	Graphic Log	Material Type	MATERIAL DESCRIPTION	Sample Type	Sample Number	Driving Resistance, blows/ft	Normalization to SPT	Dry Unit Weight, pcf	Water Content, %	UC, psf	PI, %	Deg. of Saturation (%)
0		CL	Soft, grayish brown to olive brown, silty fine sandy clay with yellowish brown mottling and rock fragments, moist to very moist (Slide Debris)		2-1 (2.5")	4	2	89.3	15.6			47.5
					2-2 (2.5")	11	7	100.2	22.5	421		89.1
5		CL	Firm, dark grayish brown to grayish brown, fine sandy clay with lenses of brown fine sandy silt, yellowish brown and olive mottling and pebbles, moist (Fill)		2-3 (2.0")	13	10	104.5	21.0	1069		92.5
					2-4 (2.0")	25	19	104.7	20.1	611		89.1
					2-5 (spt)	9	9					
10					2-6 (spt)	15	15					
		CL	Stiff to very stiff, very dark grayish brown, silty clay with gray mottling and scattered rock fragments, moist (Possible Native Soil)		2-7 (spt)	17	17					
15					1-8 (spt)	26	26					
					2-9 (spt)	41	41					
			Boring terminated at 18'									
20												

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Figure 4

Project: **Mills Canyon Park** Project Location: **Burlingame, California** Project Number: **23-5131**	Log of Boring 3 **Sheet 1 of 1**

Date(s) Drilled **May 22, 2023**	Logged By **SF**	Checked By **JM + JP**
Drilling Method **Continuous Sampling**	Drill Bit Size/Type **4" +/- Diameter**	Total Depth of Borehole **20'**
Drill Rig Type **Minuteman**	Drilling Contractor **Access Soil Drilling**	Approximate Surface Elevation
Groundwater Level and Date Measured **6'**	Sampling Method(s) **2.5", 2.0", spt**	Hammer Data **140 lb: 30" drop**
Borehole Backfill		

Depth (feet)	Graphic Log	Material Type	MATERIAL DESCRIPTION	Sample Type	Sample Number	Driving Resistance, blows/ft	Normalization to SPT	Dry Unit Weight, pcf	Water Content, %	UC, psf	PI, %	Deg. of Saturation (%)
0		CL	Soft, dark grayish brown, silty fine sandy clay with olive gray mottling and rock fragments, very moist (Slide Debris)		3-1 (2.5")	5	3	86.9	22.8			65.5
		SC-CL	Firm to stiff, grayish brown, clayey fine to medium sand to sandy clay with strong brown and yellowish brown mottling and rock fragments, moist to very moist (Slide Debris)		3-2 (2.5")	14	8	120.5	10.8	910	16.8	73.2
5					3-3 (2.5")	29	17	108.2	19.2			93.7
		CL	Stiff, dark grayish brown, silty fine sandy clay with yellowish brown mottling and rock fragments, moist (Fill)		3-4 (2.0")	24	18	108.2	19.9			96.4
		SC	Medium dense, pale yellowish brown clayey fine sand with yellowish brown mottling, moist (Fill)		3-5 (2.0")	31	23					
10					3-6 (spt)	13	13					
		CL	Stiff to very stiff, dark grayish brown, fine sandy clay with bluish gray and yellowish brown mottling and pebbles, moist (Fill)		3-7 (spt)	15	15					
15					3-8 (spt)	21	21					
					3-9 (spt)	28	28					
					3-10 (spt)	29	29					
20			Boring terminated at 20'									

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Macintosh HD:Users:user 1:Desktop:Unfinished Boring Logs:Mill Canyon Park (Arguello).bg4[Company (with PI).tpl]

Figure 5

Project: **Mills Canyon Park** Project Location: **Burlingame, California** Project Number: **23-5131**	Log of Boring 4 **Sheet 1 of 1**

Date(s) Drilled **May 22, 2023**	Logged By **SF**	Checked By **JM + JP**
Drilling Method **Continuous Sampling**	Drill Bit Size/Type **4" +/- Diameter**	Total Depth of Borehole **16'**
Drill Rig Type **Minuteman**	Drilling Contractor **Access Soil Drilling**	Approximate Surface Elevation
Groundwater Level and Date Measured **11' 6"**	Sampling Method(s) **2.5", 2.0", spt**	Hammer Data **140 lb: 30" drop**
Borehole Backfill		

Depth (feet)	Graphic Log	Material Type	MATERIAL DESCRIPTION	Sample Type	Sample Number	Driving Resistance, blows/ft	Normalization to SPT	Dry Unit Weight, pcf	Water Content, %	UC, psf	PI, %	Deg. of Saturation (%)
0		CL	Soft, dark yellowish brown, fine sandy clay with yellowish brown mottling and rock fragments, moist to very moist (Slide Debris)		4-1 (2.5")	5	3	110.7	18.3	301		94.8
		CL	Firm, olive gray to olive brown, silty fine sandy clay with yellowish brown mottling and rock fragments, moist to very moist (Slide Debris)		4-2 (2.5")	8	5	104.8	16.9			75.2
5					4-3 (2.5")	14	8	108.5	18.6	468		90.6
		SM-ML	Firm to stiff, yellowish brown, silty clayey fine sand to fine sandy silt with grayish brown mottling and rock fragments, moist (Fill)		4-4 (2.0")	17	13	123.1	11.9	1145		87.1
					4-5 (2.0")	37	28	107.6	17.6			84.1
10					4-6 (spt)	19	19					
					4-7 (spt)	11	11					
15		CL	Stiff, dark grayish brown, fine sandy clay with bluish gray and yellowish brown mottling and pebbles, moist (Fill)		4-8 (spt)	22	22					
			Boring terminated at 16'									
20												

Michelucci & Associates

Macintosh HD:Users:user 1:Desktop:Unfinished Boring Logs:Mill Canyon Park (Arguello).bg4[Company (with PI).tpl]

Figure 6

Project: **Mills Canyon Park**
Project Location: **Burlingame, California**
Project Number: **23-5131**

Key to Log of Boring
Sheet 1 of 1

Depth (feet)	Graphic Log	Material Type	MATERIAL DESCRIPTION	Sample Type	Sample Number	Driving Resistance, blows/ft	Normalization to SPT	Dry Unit Weight, pcf	Water Content, %	UC, psf	PI, %	Deg. of Saturation (%)
1	2	3	4	5	6	7	8	9	10	11	12	13

COLUMN DESCRIPTIONS

1 Depth (feet): Depth in feet below the ground surface.
2 Graphic Log: Graphic depiction of the subsurface material encountered.
3 Material Type: Type of material encountered.
4 MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
5 Sample Type: Type of soil sample collected at the depth interval shown.
6 Sample Number: Sample identification number.
7 Driving Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.
8 Normalization to SPT: 2.5" and 2.0" blow count converted to SPT
9 Dry Unit Weight, pcf: Dry weight per unit volume of soil sample measured in laboratory, in pounds per cubic foot.
10 Water Content, %: Water content of the soil sample, expressed as percentage of dry weight of sample.
11 UC, psf: Unconfined compressive strength, in pounds per square foot (ASTM D2216).
12 PI, %: Plasticity Index, expressed as a water content (ASTM D4318).
13 Deg. of Saturation (%): Deg. of Saturation (%)

FIELD AND LABORATORY TEST ABBREVIATIONS

CHEM: Chemical tests to assess corrosivity
COMP: Compaction test
CONS: One-dimensional consolidation test
LL: Liquid Limit, percent
PI: Plasticity Index, percent
SA: Sieve analysis (percent passing No. 200 Sieve)
UC: Unconfined compressive strength test, Qu, in psf
WA: Wash sieve (percent passing No. 200 Sieve)

MATERIAL GRAPHIC SYMBOLS

Lean CLAY, CLAY w/SAND, SANDY CLAY (CL)
Clayey SAND (SC)
Clayey SAND to Sandy CLAY (SC-CL)
Silty SAND to Sandy SILT (SM-ML)

TYPICAL SAMPLER GRAPHIC SYMBOLS

Auger sampler
Bag Sample
Bulk Sample
3-inch-OD California w/ brass rings
CME Sampler
Grab Sample
2.5-inch-OD Modified California w/ brass liners
Pitcher Sample
2-inch-OD unlined split spoon (SPT)
Shelby Tube (Thin-walled, fixed head)

OTHER GRAPHIC SYMBOLS

Water level (at time of drilling, ATD)
Water level (after waiting)
Minor change in material properties within a stratum
Inferred/gradational contact between strata
Queried contact between strata

GENERAL NOTES

1: Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
2: Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

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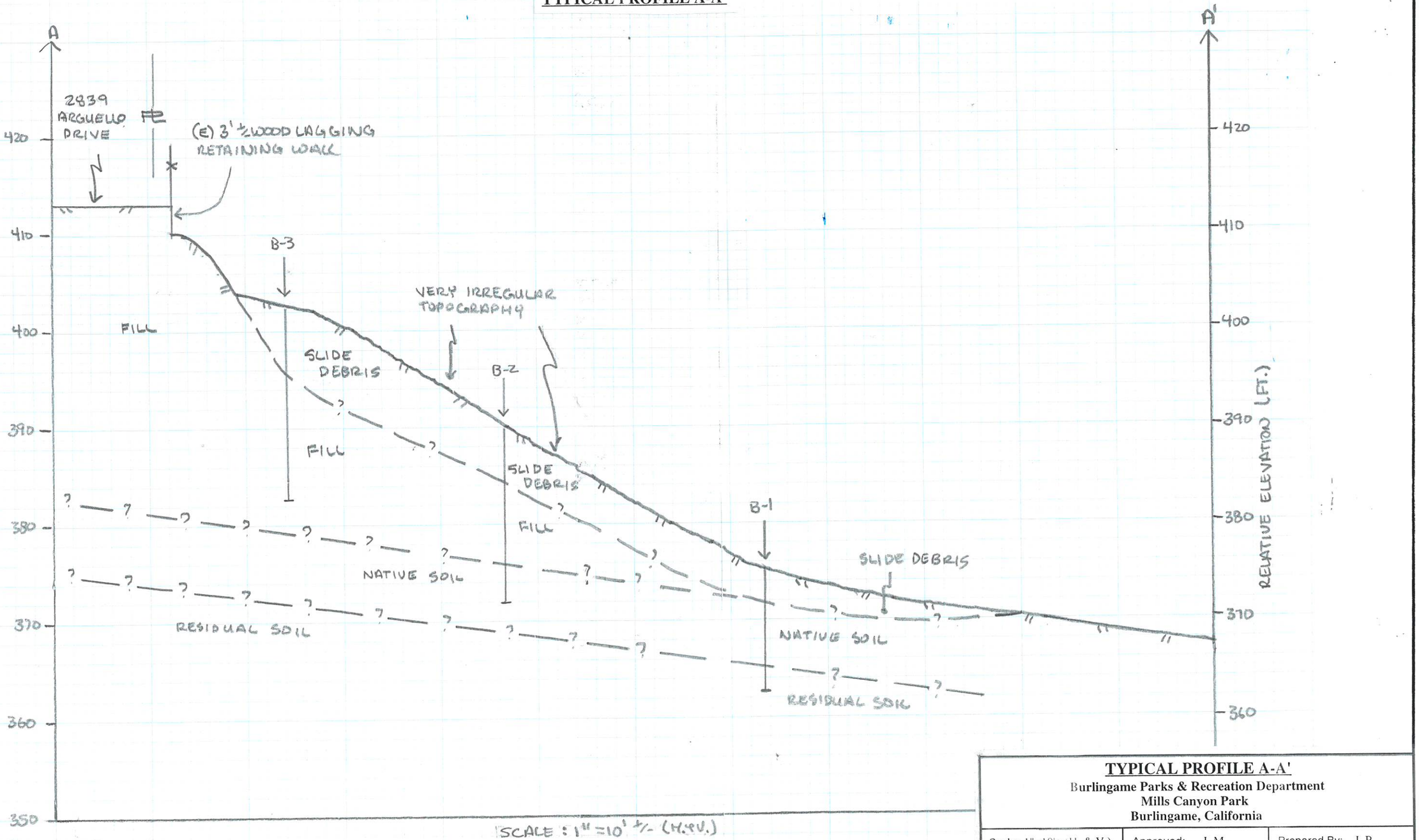
Figure 7

TYPICAL PROFILE A-A'



* Topography based on the topographic contours shown on the topographic survey of the site prepared by Dains Land Surveying, dated June 9, 2023.

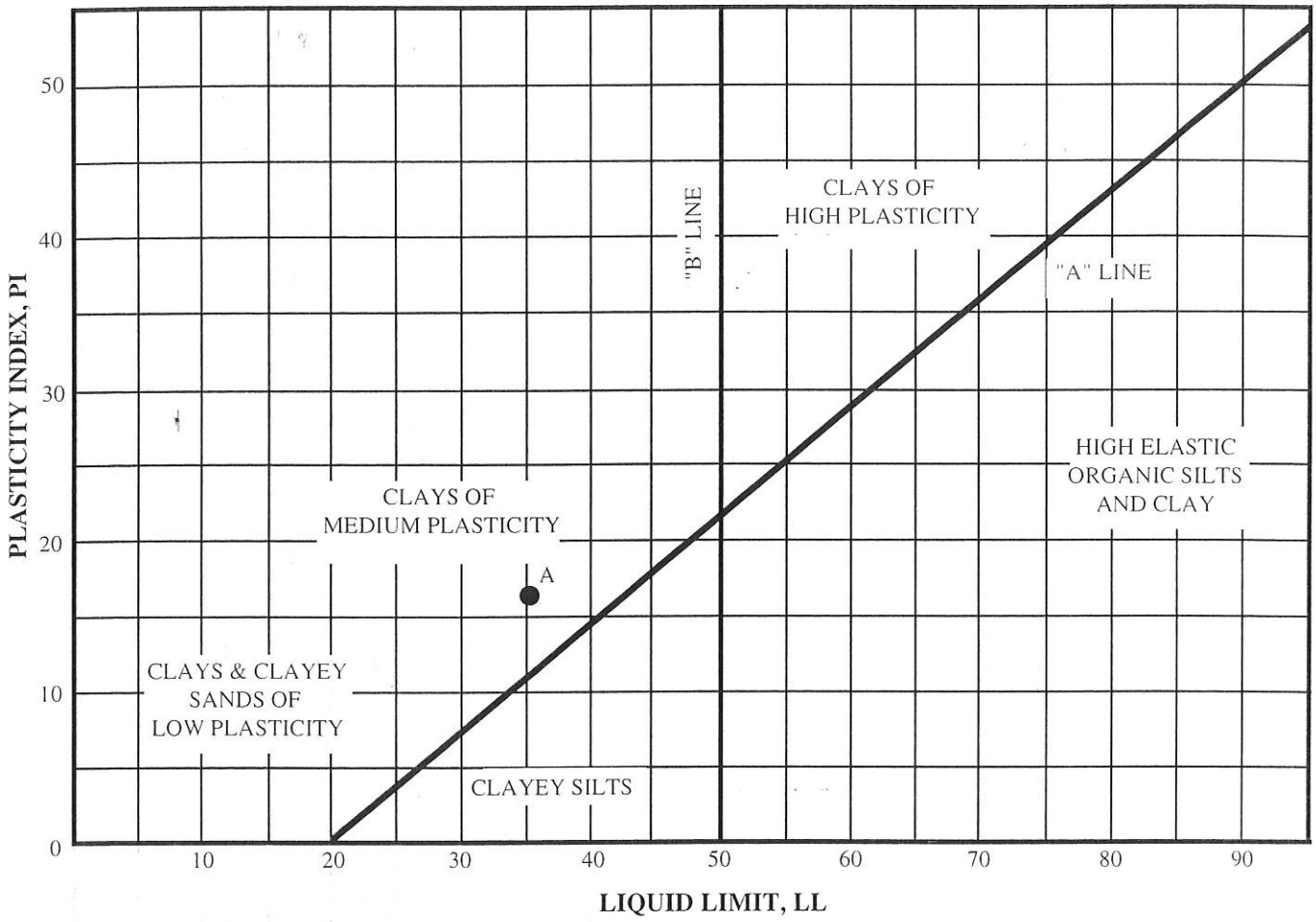
TYPICAL PROFILE A-A'

Burlingame Parks & Recreation Department
Mills Canyon Park
Burlingame, California

Scale: 1"=10'± (H. & V.)	Approved: J. M.	Prepared By: J. P.
Date: 7-5-23		Revised:

Michelucci & Associates, Inc.

Job No. 23-5131		Figure 8

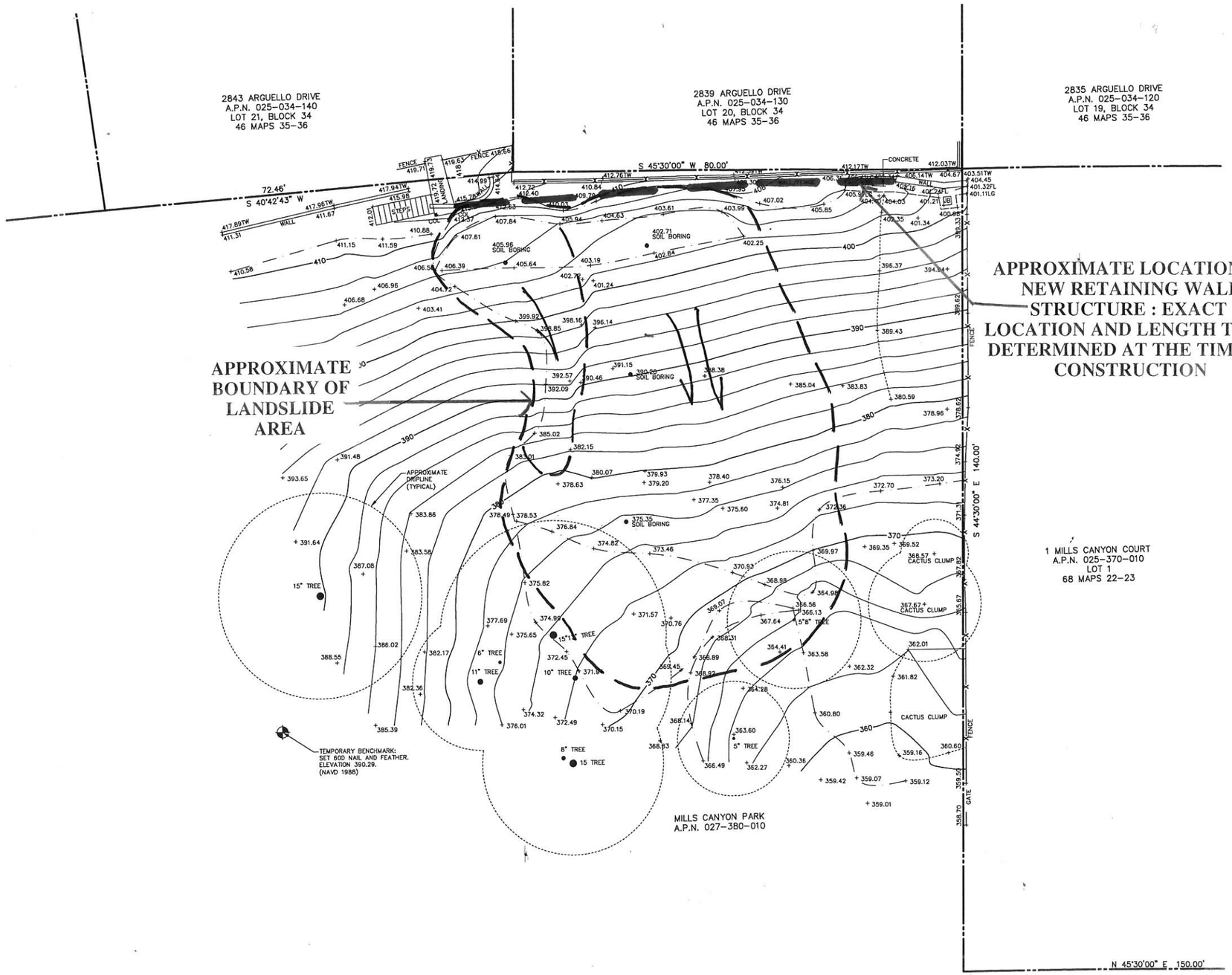


CLASSIFICATION TEST RESULTS

SAMPLE IDENTIFICATION			ATTERBERG LIMITS			GRAIN SIZES % DRY WT.			
SAMPLE	LETTER DESIGNATION	DESCRIPTION	LIQUID LIMIT	PLASTICITY INDEX	SHRINKAGE LIMIT	SAND	SILT	CLAY	COLLOIDAL
3-2	A	Olive gray to grayish brown, fine sandy clay with brownish yellow mottling and rock fragments - sample depth 3 feet to 3 feet 6 inches below grade **(Slide Debris)**	35.0	16.8	--	--	--	--	--

PLASTICITY CLASSIFICATION

Job No. **23-5131** | Michelucci & Associates, Inc. | Figure **9**



Feet

0 20 40

Scale

EXPLANATION

Proposed Retaining Wall Structure

UTILITY NOTE:

THE UTILITIES EXISTING ON THE SURFACE AND SHOWN ON THIS DRAWING HAVE BEEN LOCATED BY FIELD SURVEY. UNDERGROUND UTILITIES ARE NOT SHOWN ON THIS DRAWING.

FLOOD ZONE NOTE:

THE SUBJECT PROPERTY LIES ENTIRELY WITHIN FLOOD ZONE "X", BASED ON FLOOD INSURANCE RATE MAP 06081C0134F, DATED APRIL 5, 2019.

EASEMENT NOTE:

EASEMENTS, IF ANY, ARE NOT INDICATED HEREON.

LEGEND

———	PROPERTY LINE
FL	FLOWLINE
JB	JUNCTION BOX
LG	LIP OF GUTTER
TW	TOP OF WALL
● 12" TREE	TREE W/ SIZE
—X—X—	FENCE

* Base map from a topographic survey of the site prepared by Dains Land Surveying, dated June 9, 2023.

RETAINING WALL STRUCTURE LOCATION PLAN*

Burlingame Parks & Recreation Department
Mills Canyon Park
Burlingame, California

Scale: 1"=20'±	Approved: J. M..	Prepared By: J. P.
Date: 7-31-23		Revised:

Michelucci & Associates, Inc.

Job No. **23-5131**		Figure **10**

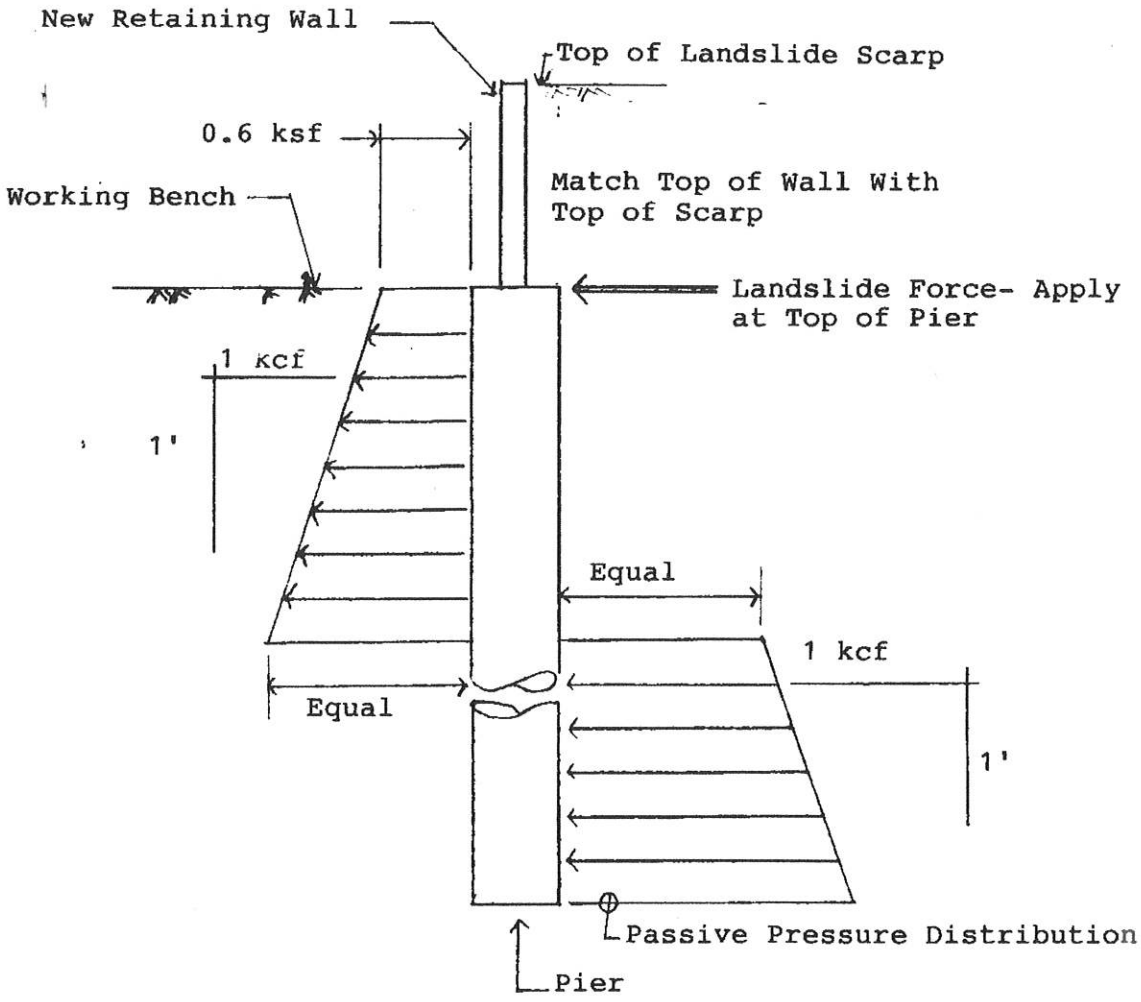
LANDSLIDE RETAINING WALL STRUCTURE DESIGN DETAILS

Burlingame Parks & Recreation Department

Mills Canyon Park

Burlingame, California

Not To Scale



Notes:

1Pier spacing should be no greater than3 diameters c-c

2.See report for slide force design criteria

3.Passive pressure distributions should be resolved over one pier diameter

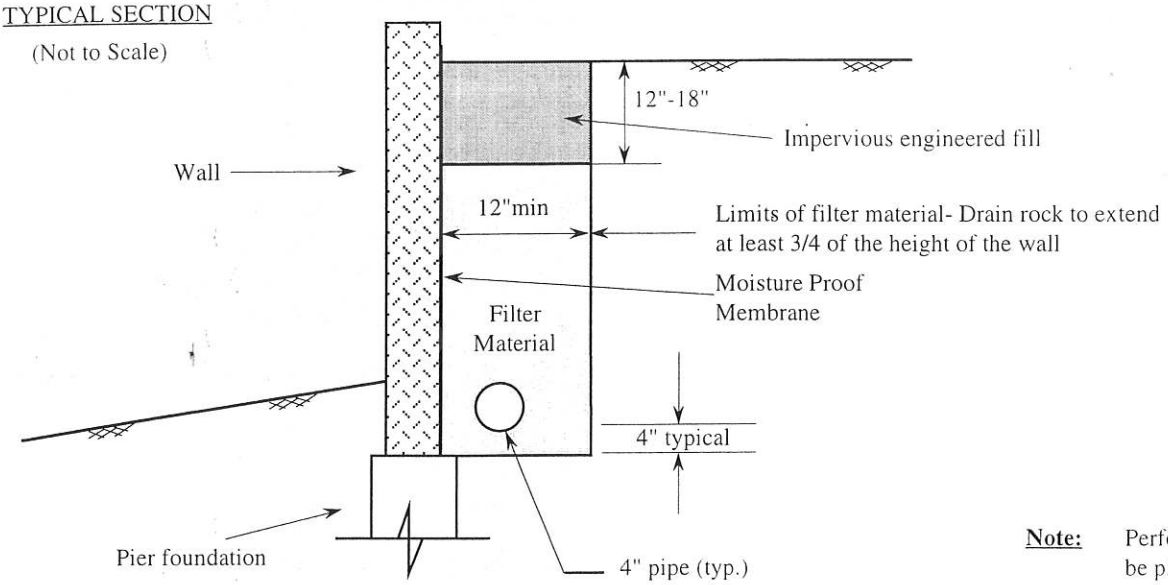
4.Possible tie backs (anchors) are not shown. Tie backs are not necessary from the geotechnical standpoint. See the soil report for a discussion of tie backs.

Job No. 23-5131	Michelucci & Associates, Inc.	Figure 11

SPECIFICATIONS FOR SUBDRAINS BEHIND RETAINING WALLS

TYPICAL SECTION

(Not to Scale)



Note: Perforated pipe shall be placed with perforations face down

Subdrain pipe shall be manufactured in accordance with the following requirements:

a. Acrylonitrile-butadiene-styrene (ABS) plastic pipe shall conform to the specifications for ABS plastic pipe given in ASTM Designation D2282 and ASTM Designation D2751. ABS pipe shall have a minimum pipe stiffness of 45 psi at 5% deflection when measured in accordance with ASTM Method D2412.

b. Polyvinyl chloride (PVC) pipe shall conform to AASHTO Designation M278. PVC pipe shall have a minimum pipe stiffness of 50 psi at 5% deflection when measured in accordance with ASTM Method D2412 except that pipe conforming to F758 shall be suitable. Schedule 40 PVC pipe shall be suitable. SDR-35 PVC pipe conforming to ASTM D3034 shall be suitable when the thickness of pipe cover does not exceed 12 feet.

Filter material for use in backfilling trenches around and over subdrain pipes and behind retaining walls shall consist of clean coarse sand and gravel or crushed stone conforming to the following requirements:

Sieve Size	% Passing Sieve
2"	100
3/4"	70 to 100
3/8"	40 to 100
#4	25 to 50
#8	15 to 45
#30	5 to 25
#50	0 to 20
#200	0 to 3

a. Class 2 " Permeable Material" conforming to the State of California Department of Transportation Standard Specifications, latest edition, Section 68-1.025 shall be suitable.

b. Clean, coarse gravel ("drain rock") shall also be suitable, provided that it is wrapped in an acceptable geotextile ("filter fabric") such as Mirafi 140N.

Michelucci & Associates, Inc.
Geotechnical Consultants

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March 5 2024
Job No. 23-5131

via e-mail: mglomstad@burlingame.org

Margaret Glomstad
Parks and Recreation Director
850 Burlingame Avenue, Burlingame CA 94010

Re: Hillside Protection from Landslide
Mills Canyon Park
Burlingame, California

Dear Ms. Glomstad:

We received and reviewed preliminary plans regarding mitigating the potential effects of the subject landslide and the plan for the past construction of a retaining wall along a portion of the rear of 2839 Arguello Drive in Burlingame. The preliminary stabilization plans are titled, "City of Burlingame, San Mateo County, Mills Canyon Landslide Repair," are dated December 22, 2023 and were prepared by Willsey and Ham. (We should note that it is not the intention to "repair" the slide, but rather to protect the uphill neighboring properties from further slide advancement.) The 2839 Arguello Drive plan is titled, "Site Plan and Retaining Wall Details," are dated October 1, 2012 and were prepared by J. Li and Associates.

The purpose of this letter is to respond to a February 15, 2024 email from Richard Holtz, the Park Superintendent/City Arborist, requesting that we review both plan sets (the J. Li and Associates plan consists of a single sheet) and provide an opinion regarding whether the construction of the hillside stabilization, as detailed on the Wilsey and Ham set, could undermine the existing 2839 Arguello Drive retaining wall. We should note that the J. Li and Associates' plan is a proposed construction plan and not an as-built plan. For the purpose of our review, we assumed that the wall at 2839 Arguello Drive was built per the location and dimensions shown on the plan.

The 2839 Arguello Drive property abuts Mills Canyon Park. The rear property line is 80 feet long, and extends roughly northwest to southeast from the adjacent neighboring property at 2843 Arguello Drive. There are two types of retaining walls that span the entire length of the 2839 Arguello Drive rear property line and support the grade difference between the higher backyard and lower elevations of Mill Canyon Park. Each retaining wall is about 40 feet long.

The easterly, 40 foot long retaining wall is depicted on the J. Li and Associates' plan. The plan indicates that the wall foundation consists of a tandem set of 18-inch diameter, drilled, cast in place reinforced concrete piers. The piers are staggered at a general spacing of 10 feet, connected by a 4-½ foot wide footing, and the piers are shown to be nominally 17 feet long.

We anticipate that the construction of the piers and new retaining wall that comprise the planned hillside protection will be carried out during the summer months. On this basis, our analysis of the easterly, 40 foot long retaining wall foundation, as is depicted on the J. Li and Associates' plan, indicates that it is unlikely to be undermined by the proposed construction.

The westerly 40 foot long retaining wall consists of wood lagging between steel I-beams. There are no details on the J. Li and Associates' plan for this wall, and we also have no information about the type and dimensions of the foundations supporting it. If no plans that illustrate the design and/or construction of the foundations can be found, then we repeat the suggestion contained in our October 23, 2023 letter, namely, "excavating ("potholing") adjacent to, and over a short width of the existing retaining wall base to expose the foundation(s) and determine the foundation type, size and, if possible, depth." As also noted in the October 23 letter, "if the support of the existing foundations is found to be at risk, options for reducing the risk can be evaluated once the existing foundation details are known."

The Willsey and Ham plans include a preliminary design of a road to provide access the site for construction personnel and equipment. The road would begin from the end of an existing 20 foot wide access road southwest of 2847 Arguello Drive, and would then curve sharply to run more or less parallel to and behind both the 2847 and 2843 Arguello Drive rear property lines, terminating at the headscarp of landslide.

Grading for this access road woud include both cuts and fills (cuts into the upslope area above the road alignment and fills on the downslope area below the alignment). Cut and fill slope inclinations would apparently range from 1-½ horizontal to 1 vertical to 3 horizontal to 1 vertical, depending on the local topography traversed by the road.

We judge that this preliminary design would be acceptable from a geotechnical engineering standpoint, provided that the stabilization work occurs during summer months and is completed before the next winter.

In addition, the stabilization contractor should be required to restore the integrity of the area through which the access road will traverse to the original lines and grades after access is no longer required. We anticipate that restoration could be done by first excavating all the fill placed along the access road alignment, and then constructing an engineered fill that would begin from the toe of the temporary access road fill(s) and continue to or above the upper limit of excavation(s) made above the road alignment. In view of the area topography, it may be necessary to over-build the fill, trimming the over-built fill after it has been completed to match the lines and grades of the hillside on either side of the fill. The hillside should also be seeded to minimize erosion, and some maintenance should be anticipated during the first winter or two after grading.

It has been a pleasure working with you on the project. Please contact us with any questions or comments.

Very truly yours,
MICHELUCCI & ASSOCIATES

Joseph Michelucci
Geotechnical Engineer #593
(Expires 3/31/25)

CC: Richard Holtz (rholtz@burlingame.org)
Eric Cohen (ECohen@wilseyham.com)