

SPECIFICATIONS AND OTHER BIDDING AND CONTRACT DOCUMENTS

**COUNTY OF ALAMEDA PROJECT #21152.1
JUVENILE JUSTICE CENTER (JJC) EXTERIOR EXERCISE EQUIPMENT
2500 FAIRMONT DR.
OAKLAND, CALIFORNIA 94578**

**MANDATORY COMBINED PRE-BID CONFERENCE SITE VISIT
WEDNESDAY, DECEMBER 20, 2023 AT 10AM
JUVENILE JUSTICE CENTER (JJC)
2500 FAIRMONT DR. OAKLAND, CALIFORNIA 94578**

**THE COUNTY OF ALAMEDA
GENERAL SERVICES AGENCY
CAPITAL PROGRAMS DEPARTMENT
1401 LAKESIDE DRIVE, #800
OAKLAND, CALIFORNIA
(510)208-9578**



**Architecture and Engineering
AE3 Partners, Inc.
315 Montgomery Street
#1000
San Francisco, CA 94104
PHONE: (415)233-9991**

SUMMARY BIDDING CALENDAR

NOTICE – THIS SUMMARY IS FOR INFORMATIONAL PURPOSES ONLY AND DOES NOT LIST ALL DATES OR TIMES IN THE BIDDING DOCUMENTS. The dates and times listed may not be relied upon or enforced. This summary does not form a part of the contract documents and does not establish contractual obligations. All bidders and contractors must refer to the actual documents for all applicable dates, times, and time periods.

Event	Date	Reference
Contract Documents Available	DECEMBER 13, 2023	00 11 16 Notice to Bidders
Combined Mandatory In Person Pre-Bid Conference	DECEMBER 20, 2023, 10 A.M.	00 11 16 Notice to Bidders
Combined Mandatory Site Visit	DECEMBER 20, 2023, 10 A.M.	00 11 16 Notice to Bidders
Last Day for Receipt of Requests for Substitutions before Receipt of Bids	DECEMBER 28, 2023	00 21 13 Instructions to Bidders
Last Day for Receipt of Questions	DECEMBER 28, 2023	00 21 13 Instructions to Bidders
Receipt of Bids and Bid Opening	JANUARY 11, 2024, by 2:00 P.M.	00 11 16 Notice to Bidders 00 21 13 Instructions to Bidders Supplemental Instructions to Bidders
Notice of Intent to Award	JANUARY 12, 2024	00 51 13 Notice of Intent to Award
Last Day to Submit Bid Protest	JANUARY 19, 2024	00 21 13 Instructions to Bidders
Estimated Date of Notice of Award	FEBRUARY 14, 2024	TBD by County (Board date)
Signing of Contract	FEBRUARY 28, 2024	00 11 16 Notice to Bidders 00 51 10 Notice of Award
Submit Post-Award Documents	FEBRUARY 23, 2024	00 21 13 Instructions to Bidders
Last Day to Submit Escrow Bid Documentation	FEBRUARY 23, 2024	00 61 30 Escrow Bid Documentation
Contract Duration	90 calendar days	00 52 13 Agreement Form – Stipulated Sum (Single-Prime Contract)
Contract Duration Begins	FEBRUARY 28, 2024	00 55 00 Notice to Proceed
Estimated Contract Duration Ends	MAY 28, 2024	00 55 00 Notice to Proceed
Last Day to Submit Preliminary Schedule, and other documents as noted, per Notice to Proceed	MARCH 13, 2024	00 55 00 Notice to Proceed

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END OF DOCUMENT

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LIST OF SCHEDULES

SCHEDULES

Project Duration: 90 Calendar Days

Milestones:

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- Set Up
- Equipment Delivery
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- Demolition
- Site preparation
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- Equipment Installation
- Site clearance

END OF DOCUMENT

NOTICE TO BIDDERS

1. Notice is hereby given that the County of Alameda General Services Agency (“GSA”) Capital Programs (“County” or “Owner”) will receive sealed bids for the following project, Bid No. 21152.1 (“Project” or “Contract”):
2. Sealed Bids will be received until 2:00 p.m., JANUARY 11, 2024 at 1401 Lakeside Drive, 8th Floor, Capital Programs, Suite 800, Oakland, California, at or after which time the bids will be opened and publicly read aloud in Room 1107. Any claim by a bidder of error in its bid must be made in compliance with §5100 et seq. of the Public Contract Code. Any bid that is submitted after this time shall be considered non-responsive and returned to the bidder.
3. The Project consists of:
The Alameda County Probation Department (ACPD) Outdoor Recreation Enhancements for the Youth Physical Activities project is a portion of planned, critical improvements to the Alameda County Juvenile Justice Center (JJC), which houses the ACPD Juvenile Hall. In order to create a secure rehabilitation program that meets the specific and individualized needs of the youth and young adults previously housed at the Department of Juvenile Justice, ACPD seeks to create a therapeutic housing environment that includes both indoor and outdoor activity areas for youth and their families to utilize.
This project will involve the construction of an outdoor exercise area, including the supply and install of equipment, surfacing and all associated groundworks in accordance with the construction drawings. These improvements are essential to the creation of a mentally, physically, and spiritually rehabilitative space for returning youth and young adults.
4. All bids shall be on the Bid Form Document 00 41 13 provided by the County. Each bid must conform to and be responsive to all pertinent Contract Documents, including, but not limited to, the Instructions to Bidders Document 00 21 13 and the Supplemental Instructions to Bidders Document 00 22 19.
5. To bid on this Project, the Bidder is required to possess the following State of California Contractor Licenses:

B Contractors License

The Bidder’s license must remain active and in good standing throughout the term of the Contract.

6. A bid bond by an admitted surety insurer on the form provided by the County, cash, or a cashier’s check or a certified check, drawn to the order of the County of Alameda, in the amount of ten percent (10%) of the total bid price, shall accompany the Bid Form, as a

guarantee that the Bidder will, within seven (7) calendar days after the date of the Notice of Award, enter into a contract with the County for the performance of the services as stipulated in the bid.

7. The successful Bidder shall be required to furnish a 100% Performance Bond and a 100% Payment Bond if it is awarded the contract for the Work.
8. The successful Bidder may substitute securities for any monies withheld by the County to ensure performance under the Contract, in accordance with the provisions of §22300 of the Public Contract Code.
9. The Contractor and all Subcontractors under the Contractor shall pay all workers on all work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the County, pursuant to §§1770 et seq. of the California Labor Code. Prevailing wage rates are also available from the County or on the Internet at: <http://www.dir.ca.gov>.
10. This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The following requirements apply to this bid and contract:
 - A. No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code §1725.5 [with limited exceptions from this requirement for bid purposes only under Labor Code §1771.1(a)].
 - B. No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code §1725.5.
11. Mandatory combined pre-bid conference site visit will be held on **December 14, 2023** at 10AM. All participants are required to sign in at the site. Each site visit is expected to take approximately one hour. If mandatory, failure to attend or arrival after the material start of the meeting will render the bidder ineligible to bid and their bid will be considered not responsive.
12. Contract Documents and technical specifications were made available to Contractors as of December 8, 2023.
13. It is County policy to minimize the expenditure of County funds on goods and services produced by any entity which buys, sell, leases or distributes commodities and/or professional services to (1) the government of Burma; or (2) any entity organized under the laws of Burma; or (3) any entity which does business with any private or public entity located in Burma, or conducts operations in Burma. Contractors are urged to comply with

the policy in making purchases and subcontracts. (Alameda County, Administrative Code §4.32.050(B),(F)). Burma is now known as Myanmar or, officially, the Republic of the Union of Myanmar.

14. The County reserves the right to reject any and all bids and/or waive any irregularity in any bid received. If the County awards the Contract, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (90) days after the date of the bid opening.
15. The County shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on the base bid amount only.

END OF DOCUMENT

INSTRUCTIONS TO BIDDERS

Bidders shall follow the instructions in this document, and shall submit all documents, forms, and information required for consideration of a Bid.

County will evaluate information submitted by the apparent low Bidder and, if incomplete or unsatisfactory to County, Bidder's bid may be rejected at the sole discretion of County.

1. Bids are requested for a general construction contract, or work described in general, for the following project ("Project" or "Contract"):
2. GSA will receive sealed Bids from Bidders as stipulated in the Notice to Bidders Document 00 11 16.
3. Bidders must submit Bids on Document 00 41 13 (Bid Form-Stipulated Sum) and all other required County forms. Bids not submitted on the County's required forms shall be deemed non-responsive and shall not be considered. Additional sheets required to fully respond to requested information are permissible.
4. Bidders must supply all information required by each Bid Document. Bids must be completed in full. County reserves the right in its sole discretion to reject any Bid as non-responsive as a result of any error or omission in the Bid. Bidders must complete and submit all of the following documents with Bid Form Document 00 41 13:
 - a. Document 00 43 13 Bid Security Form or other security
 - b. Document 00 43 36 Designated Subcontractors List
 - c. Document 00 45 01 Site-Visit Certification, if a site visit was required.
 - d. Document 00 45 13 Non-Collusion Declaration
 - e. Document 00 52 13.1 Completed Debarment Form.
5. Bidders must submit with their Bids cash, a cashier's check or a certified check payable to County, or a Bid Bond of not less than ten percent (10%) of amount of base Bid. Required form of corporate surety, Bid Security Form Document 00 43 13, is provided by County and must be used and fully completed by Bidders choosing to provide a Bid Bond as security. The Surety on Bidder's Bid Bond must be an insurer admitted in the State of California and authorized to issue surety bonds in the State of California. Bids submitted without necessary bid security will be deemed non-responsive and will not be considered.
6. If Bidder to whom Contract is awarded shall for **SEVEN (7)** calendar days after the date of the Notice of Award, fail or neglect to enter into Contract and submit required bonds,

insurance certificates, and all other required documents, County may deposit Bid Bond, cash, cashier's check, or certified check for collection, and proceeds thereof may be retained by County as liquidated damages for failure of Bidder to enter into Contract, in the sole discretion of County. It is agreed that calculation of damages County may suffer as a result of Bidder's failure to enter into the Contract would be extremely difficult and impractical to determine and that the amount of the Bidder's required bid security shall be the agreed and conclusively presumed amount of damages.

7. Bidders must submit with the Bid the Designated Subcontractors List for those subcontractors who will perform any portion of Work, including labor, rendering of service, or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one half of one percent (0.5%) of total Base Bid. Failure to submit this list when required shall result in Bid being deemed non-responsive and the Bid will not be considered.
8. If a mandatory pre-bid conference and site visit ("Site Visit") is requested as referenced in the Instructions to Bidders, then Bidders must submit the Site-Visit Certification with their Bid. County will transmit to all prospective Bidders of record such Addenda as County in its discretion considers necessary in response to questions arising at the Site Visit. Oral statements shall not be relied upon and will not be binding or legally effective. Addenda issued by the County as a result of the Site Visit, if any shall constitute the sole and exclusive record and statement of the results of the Site Visit.
9. Bidders shall submit the Non-Collusion Declaration Document 00 45 13 with their Bids. Bids submitted without the Non-Collusion Declaration shall be deemed non-responsive and will not be considered.
10. Bids shall be clearly written without erasure or deletions. County reserves the right to reject any Bid containing erasures or deletions.
11. Bidders shall not modify Document 00 41 13 (Bid Form-Stipulated Sum) or qualify their Bids. Bidders shall not submit to the County a scanned, re-typed, word-processed, or otherwise recreated version of Document 00 41 13 (Bid Form-Stipulated Sum) or other County-provided document.
12. The successful Bidder and all its subcontractors shall pay all workers on all work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of the County, pursuant to §§1770 et seq. of the California Labor Code.

13. Submission of a Bid signifies careful examination of Contract Documents and complete understanding of the nature, extent, and location of Work to be performed. Bidders must complete the tasks listed below as a condition to bidding, and submission of a Bid shall constitute the Bidder's express representation to County that Bidder has fully completed the following:
- a. Bidder has visited the Site and has examined thoroughly and understood the nature and extent of the Contract Documents, Work, Site, locality, actual conditions, as-built conditions, and all local conditions and federal, state and local laws, and regulations that in any manner may affect cost, progress, performance, or furnishing of Work or that relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto;
 - b. Bidder has conducted or obtained and has understood all examinations, investigations, explorations, tests, reports, and studies that pertain to the subsurface conditions, as-built conditions, underground facilities, and all other physical conditions at or contiguous to the Site or otherwise that may affect the cost, progress, performance, or furnishing of Work, as Bidder considers necessary for the performance or furnishing of Work at the Contract Sum, within the Contract Time, and in accordance with the other terms and conditions of Contract Documents, including specifically the provisions of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies, or similar information or data are or will be required by Bidder for such purposes;
 - c. Bidder has correlated its knowledge and the results of all such observations, examinations, investigations, explorations, tests, reports, and studies with the terms and conditions of the Contract Documents;
 - d. Bidder has given County prompt written notice of all conflicts, errors, ambiguities, or discrepancies that it has discovered in or among the Contract Documents and the actual conditions, and the written resolution thereof by County is acceptable to Bidder;
 - e. Bidder has made a complete disclosure in writing to County of all facts bearing upon any possible interest, direct or indirect, that Bidder believes any representative of County or other officer or employee of County presently has or will have in this Contract or in the performance thereof or in any portion of the profits thereof (see Government Code §1090, et seq.);
 - f. Bidder must, prior to bidding, perform the work, investigations, research, and

analysis required by this document and that Bidder represents in its Document 00 41 13 (Bid Form-Stipulated Sum) and the Agreement that it performed prior to bidding. Bidders are charged with all information and knowledge that a reasonable bidder would ascertain from having performed this required work, investigation, research, and analysis. Bid prices must include the entire cost of all work “incidental” to completion of the Work.

- g. Conditions Shown on the Contract Documents: Information as to underground conditions, as-built conditions, or other conditions or obstructions, indicated in the Contract Documents (for example, on Drawings or in Specifications), has been obtained with reasonable care, and has been recorded in good faith. However, County only warrants, and Bidder may only rely on, the accuracy of limited types of information.
- (1) As to above-ground conditions or as-built conditions shown or indicated in the Contract Documents, there is no warranty, express or implied, or any representation express or implied, that such information is correctly shown or indicated. In submitting its Bid, Bidder shall rely on the results of its own independent investigation. In submitting its Bid, Bidder shall not rely on County-supplied information regarding above-ground conditions or as-built conditions.
 - (2) As to any subsurface condition shown or indicated in the Contract Documents, Bidder may rely only upon the general accuracy of actual reported depths, actual reported character of materials, actual reported soil types, actual reported water conditions, or actual obstructions shown or indicated. County is not responsible for the completeness of such information for bidding or construction; nor is County responsible in any way for any conclusions or opinions of Bidder drawn from such information; nor is County responsible for subsurface conditions that are not specifically shown (for example, County is not responsible for soil conditions in areas contiguous to areas where a subsurface condition is shown).
- h. Conditions Shown in Reports and Drawings Supplied for Informational Purposes: Reference is made to Document 00 31 19 Existing Conditions Information, for identification of:
- (1) Subsurface Conditions: Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that have been utilized by Architect in preparing the Contract Documents; and
 - (2) Physical Conditions: Those drawings of physical conditions in or relating

to existing surface or subsurface structures at or contiguous to the Site that has been utilized by Architect in preparing the Contract Documents.

- (3) These reports and drawings are **not** Contract Documents and, except for any “technical” data regarding subsurface conditions specifically identified in Document 00 31 19 Existing Conditions Information, and underground facilities data, Bidder may not in any manner rely on the information in these reports and drawings. Subject to the foregoing and must not rely on information provided by County.
14. Bidders may examine any available “as-built” drawings of previous work by giving County reasonable advance notice. County will not be responsible for accuracy of “as-built” drawings. The Document 00 31 19 Existing Conditions Information applies to all supplied “as-built” drawings.
15. Copies of the general prevailing rates of per diem wages for each craft, classification, or type of worker needed to execute the Contract, as determined by Director of the State of California Department of Industrial Relations, are on file at the County’s principal office. Prevailing wage rates are also available from the County or on the internet at [www. Dir.ca.gov](http://www.Dir.ca.gov).
16. All questions about the meaning or intent of the Contract Documents are to be directed in writing, including by e-mail, to County. Interpretations or clarifications considered necessary by County in response to such questions will be issued in writing by Addenda faxed, mailed, or delivered to all parties recorded by County as having received the Contract Documents. Questions received less than **TEN (10)** business days prior to the date for opening Bids may not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.
17. Addenda may also be issued to modify other parts of the Contract Documents as deemed advisable by County.
18. Each Bidder must acknowledge each Addendum in its Document 00 41 13 (Bid Form-Stipulated Sum (Single Prime Contract)) by number, or its Bid shall be considered non-responsive. Addenda shall be part of the Contract Documents. A complete listing of Addenda may be secured from County.
19. Bids shall be based on products and systems specified in Contract Documents or listed by name in Addenda. County is not responsible or liable in any way for a Bidder’s damages and/or claims related, in any way, to that Bidder’s basing its bid on any requested substitution that County has not approved. Bidders and materials suppliers who submit

requests for substitutions prior to the award of the Contract must do so in writing and in compliance with Public Contract Code §3400. All requests must comply with the following:

- a. County must receive any request for substitution a minimum of **TEN (10)** business days prior to bid opening.
 - b. Requests for substitutions shall contain sufficient information to assess acceptability of product or system and impact on Project, including, without limitation, the requirements specified in Document 00 73 13 (Special Conditions) and the Specifications. Insufficient information shall be grounds for rejection of the request for substitution.
 - c. Approved substitutions shall be listed in Addenda. County reserves the right not to act upon submittals of substitutions until after bid opening.
 - d. Substitutions may be requested after Contract has been awarded only if indicated in and in accordance with requirements specified in the Document 00 73 13 (Special Conditions) and the Specifications.
20. All Bids must be sealed and marked with the name and address of the Bidder and the Project Number, Bid number, Bid package, and time of bid opening. Bids will be received as indicated in the Notice to Bidders.
- a. Mark envelopes with the name of the Project.
 - b. Bids must be submitted at the place and by date and time shown in the Instructions to Bidders.
 - c. Bids must contain all documents as required herein.
21. Bids will be opened publicly immediately after the time indicated for receipt of bids.
22. This Contract may include alternates. Alternates are defined as alternate products, materials, equipment, systems, methods, or major elements of the construction that may, at the County's option and under terms established in the Contract and pursuant to §20103.8 of the Public Contract Code, be selected for the Work. County shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on the criteria as indicated in these contract documents.
23. Time for Completion: County may issue a Notice to Proceed within **NINETY (90)** calendar days from the date of the Notice of Award. Once Contractor has received the Notice to Proceed, Contractor shall complete the Work within the period of time

indicated in the Contract Documents.

- a. In the event that County desires to postpone issuing the Notice to Proceed beyond the 90-day period above, it is expressly understood that with reasonable notice to the Contractor, County may postpone issuing the Notice to Proceed.
 - b. It is further expressly understood by Bidder that Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of the issuance of the Notice to Proceed beyond the 90-day period. If the Contractor believes that a postponement of issuance of the Notice to Proceed will cause a hardship to the Contractor, the Contractor may terminate the Contract. Contractor's termination due to a postponement beyond this 90-day period shall be by written notice to County within **TEN (10)** calendar days after receipt by Contractor of County's notice of postponement.
 - c. It is further understood by Bidder that in the event that Contractor terminates the Contract as a result of postponement by County, County shall only be obligated to pay Contractor for the Work that Contractor had performed at the time of notification of postponement and which County had in writing authorized Contractor to perform prior to issuing a Notice to Proceed.
 - d. Should the Contractor terminate the Contract as a result of a notice of postponement, County shall have the authority to award the Contract to the next lowest responsive responsible bidder.
24. The Bidder to whom Contract is awarded shall execute and submit the following documents by 5:00 p.m. of the **SEVENTH (7TH)** calendar day following the date of the Notice of Award. Failure to properly and timely submit these documents entitles County to reject the bid as non-responsive.
- a. Document 00 52 13 Agreement: To be executed by successful Bidder. Submit four (4) copies, each bearing an original signature.
 - b. Document 00 61 30 Escrow of Bid Documentation: This must include all required documentation. See the document Escrow of Bid Documentation for more information.
 - c. Document 00 61 13.13 Performance Bond (100%): On the form provided in the Contract Documents and fully executed as indicated on the form.
 - d. Document 00 61 13.16 Payment Bond (100%) (Contractor's Labor and Material Bond): On the form provided in the Contract Documents and fully executed as

indicated on the form.

- e. Insurance Certificates and Endorsements as required.
 - f. Document 00 45 26 Workers' Compensation Certification.
 - g. Document 00 45 46.01 Prevailing Wage and Related Labor Requirements Certification.
 - h. Document 00 45 46.04 Hazardous Materials Certification.
25. Any Bid protest by any Bidder regarding any other Bid must be submitted in writing to the County's GSA–Office of Acquisition Policy, ATTN: Contract Compliance Officer, located at 1401 Lakeside Drive, 10th Floor, Oakland, CA 94612, Email: **GSA-BidProtests@acgov.org**, before 5:00 p.m. of the FIFTH (5th) business day following the date of issuance of the Document 00 51 00 (Notice of Intent to Award). A Bid protest received after 5:00 p.m. is considered received as of the next business day.
- a. The Bid protest must contain a complete statement of the reasons and facts for the protest.
 - b. The protest must refer to the specific portions of all documents that form the basis for the protest.
 - c. The protest must include the name, address, email address, fax number and telephone number of the person representing the protesting party.
 - d. The County will notify all bidders of the protest as soon as possible.
 - e. Upon receipt of written protest, GSA–Office of Acquisition Policy, or designee, will review and evaluate the protest and issue a written decision. The GSA–Office of Acquisition Policy, may, at its discretion, investigate the protest, obtain additional information, provide an opportunity to settle the protest by mutual agreement, and/or schedule a meeting(s) with the protesting Bidder and others (as appropriate) to discuss the protest. The decision on the bid protest will be issued at least ten (10) business days prior to the Board hearing or GSA award date.
 - f. The decision will be communicated by e-mail, fax, or US Postal Service mail, and will inform the Bidder whether the recommendation to the Board of Supervisors or GSA in the Notice of Intent to Award is going to change. A copy of the decision will be furnished to all Bidders affected by the decision. As used in this paragraph, a Bidder is affected by the decision on a Bid protest if a decision on

the protest could result in the Bidder not being the apparent successful Bidder on the Bid.

- g. The decision of the GSA-Office of Acquisition Policy on the bid protest may be appealed to the Auditor-Controller's Office of Contract Compliance & Reporting (OCCR) located at 1221 Oak St., Room 249, Oakland, CA 94612, Fax: (510) 272-6502 unless the OCCR determines that it has a conflict of interest in which case an alternate will be identified to hear the appeal and all steps to be taken by OCCR will be performed by the alternate. The Bidder whose Bid is the subject of the protest, all Bidders affected by the GSA-Office of Acquisition Policy's decision on the protest, and the protestor have the right to appeal the GSA-Office of Acquisition Policy's decision. All appeals to the Auditor-Controller's OCCR shall be in writing and submitted within five (5) business days following the issuance of the decision by the GSA-Office of Acquisition Policy. An appeal received after 5:00 p.m. is considered received as of the next business day. An appeal received after the FIFTH (5th) business day following the date of issuance of the decision by the GSA-Office of Acquisition Policy shall not be considered by the GSA or the Auditor-Controller OCCR.
- h. The appeal shall specify the decision being appealed and all the facts and circumstances relied upon in support of the appeal.
- i. In reviewing protest appeals, the OCCR will not re-judge the proposal(s). The appeal to the OCCR shall be limited to review of the procurement process to determine if the contracting department materially erred in following the Bid process or, where appropriate, County contracting policies or other laws and regulations.
- j. The appeal to the OCCR also shall be limited to the grounds raised in the original protest and the decision by the GSA-Office of Acquisition Policy. As such, a Bidder is prohibited from stating new grounds for a Bid protest in its appeal. The Auditor-Controller (OCCR) shall only review the materials and conclusions reached by the GSA-Office of Acquisition Policy or department designee and will determine whether to uphold or overturn the protest decision.
- k. The Auditor's Office may overturn the results of a bid process for ethical violations by Procurement staff, County Selection Committee members, subject matter experts, or any other County staff managing or participating in the competitive bid process, regardless of timing or the contents of a bid protest.
- l. The decision of the Auditor-Controller's OCCR is the final step of the appeal process. A copy of the decision of the Auditor-Controller's OCCR will be

furnished to the protestor, the Bidder whose Bid is the subject of the Bid protest, and all Bidders affected by the decision.

- m. The County will complete the Bid protest/appeal procedures set forth in this paragraph before a recommendation to award the Contract is considered by the Board of Supervisor or GSA.
 - n. The procedures and time limits set forth in this paragraph are mandatory and are each Bidder's sole and exclusive remedy in the event of Bid Protest. A Bidder's failure to timely complete both the Bid protest and appeal procedures shall be deemed a failure to exhaust administrative remedies. Failure to exhaust administrative remedies, or failure to comply otherwise with these procedures, shall constitute a waiver of any right to further pursue the Bid protest, including filing a Government Code Claim or legal proceedings.
26. A responsive bid is a solicited bid that has been determined to be in conformance with the conditions, completion or delivery requirements, and specifications detailed in the solicitation for bid. Responsive bids are those submitted on time; contain complete information and required submittals and/or supporting documentation.
27. A responsible bidder is defined by the California Public Contract Code §1103 as "a bidder who has demonstrated the attribute of trustworthiness, as well as quality, fitness, capacity, and experience to satisfactorily perform this public works contract."
28. County reserves the right to reject any or all bids, including without limitation the right to reject any or all nonconforming, non-responsive, unbalanced, or conditional bids, to re-bid, and to reject the bid of any bidder if County believes that it would not be in the best interest of County to make an award to that bidder, whether because the bid is not responsive or the bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by County. County also reserves the right to waive inconsequential deviations not involving price, time, or changes in the Work. For purposes of this paragraph, an "unbalanced bid" is one having nominal prices for some work items and/or enhanced prices for other work items.
29. Discrepancies between written words and figures, or words and numerals, will be resolved in favor of the figures or numerals.
30. Prior to the award of Contract, County reserves the right to consider the responsibility of the Bidder. County may conduct investigations as County deems necessary to assist in the evaluation of any bid and to establish the responsibility, including, without limitation, qualifications and financial ability of Bidders, proposed subcontractors, suppliers, and other persons and organizations to perform and furnish the Work in accordance with the

Contract Documents to County's satisfaction within the prescribed time.

END OF DOCUMENT

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

(ELATION APPLICATION)

GENERAL

1. PURPOSE

1.1 By submitting a bid, Bidders acknowledge and agree to all Document 00 22 19 provisions.

2. APPLICATION

2.1 The provisions outlined in this Section 00 22 19 apply to this contract for the construction of the above-referenced project.

3. HIRING OF LOCAL APPRENTICES, YOUTH, UNEMPLOYED AND UNDEREMPLOYED RESIDENTS (FOR PROJECTS OVER \$125K)

3.1 The County of Alameda strongly encourages the hiring of local apprentices, youth, unemployed, and under-employed County residents to complete the work required for this project. Those firms that can demonstrate the ability and willingness to provide jobs required to complete this project to local apprentices, youth, unemployed and underemployed County residents should include such evidence in their bid response.

4. NONDISCRIMINATION

4.1 The Contractor shall comply with the Americans with Disabilities Act and Title VII of the Civil Rights Act of 1964 and shall not, in regard to any position for which an employee or applicant for employment is qualified, discriminate against any employee or applicant for employment because of race, creed, color, religion, disability, sex (including pregnancy, sexual orientation, or gender identity), political affiliation, national origin, age (40 or older), and genetic information (including family medical history) or by any other non-merit factors be otherwise subjected to discrimination. The Contractor shall ensure applicants are employed and that employees are treated during employment without regard to their race, age, religion, Vietnam Era Veteran's status, political affiliation, or any other non-merit factors. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other terms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

4.2 Contractor shall, in all solicitations or advertisements for employees placed on behalf

of the County, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, disability, sex (including pregnancy, sexual orientation, or gender identity), national origin, age, religion, Vietnam Era Veteran's status, political affiliation, genetic information, or any other non-merit factors.

SECTION II

CONTRACT COMPLIANCE REQUIREMENTS

1. APPLICATION

1.1 The following provisions shall apply to all contracts.

2. ALAMEDA COUNTY CONTRACT COMPLIANCE SYSTEM

2.1 Alameda County utilizes the Elation Systems contract compliance application as part of its commitment to assist contractors to comply with certain legal and contractual requirements. The Elation Systems, a secure web-based computer system, was implemented to monitor compliance and to track and report certified payroll and payment participation in County contracts.

2.2 The prime contractor and all participating subcontractors awarded contracts as a result of the bid process for this project are required to use the Elation System to submit payroll and payment information including, but not limited to, weekly certified payrolls, monthly progress payment reports and other information related to project progress. Use of the Elation System, support and training are available at no charge to prime and subcontractors participating in County contracts.

2.3 Upon contract award:

2.3.1 The County will provide contractors and subcontractors participating in any contract awarded as a result of this bid process, a code that will allow them to register and use the Elation System free of charge.

2.3.2 Contractors should schedule a representative from their office/company, along with each of their subcontractors, to attend Elation Systems training.

2.3.2.1 Free Elation Systems training session videos are available on line within the Elations Systems application.

2.4 It is the Contractor's responsibility to ensure that they and their subcontractors are registered and trained as required to utilize Elation Systems.

2.4.1 For systems support visit Elation Systems online at <http://www.elationsys.com/> or contact them at (925) 924-0340.

2.4.2 If you have questions regarding the utilization of the Elation Systems, please contact the County Project Manager.

3. MEETINGS

3.1 After the award of the contract and prior to beginning work, the County may hold a pre-construction conference at which a representative of the Contractor and of each subcontractor must attend. As it becomes necessary during the performance of the contract, the County may call meetings of the Contractor and pertinent subcontractor as needed for Project Stabilization Community Benefit Agreement (PSBCA) clarification and compliance.

4. INFORMATION AND RECORDS

4.1 For the purposes of determining compliance with the Elation application, the Contractor shall provide the County with access to all records and documents that relate to Elation Payroll and Payment entries. To the extent permitted by applicable law, proprietary information will be safeguarded.

SECTION III

1. OUTREACH

1.1 To promote the contractors and subcontractors in their efforts to develop their bidding and/or contracting relationships the County will:

1.1.1 E-mail the Notice to Bidders to vendors in the County Vendor Database and other sources. Advertise the project once a week for at least two consecutive weeks in a newspaper of general circulation in the county where the project is located, trade organizations and chambers of commerce, and plan rooms. Notice of this project will also be posted on the County Current Contracting Opportunities and Calendar of Events websites (see website URL addresses below).

1.1.2 Incorporate a networking and informational component in the mandatory bid walk/site visit.

1.1.3 E-mail the list of attendees from the mandatory bid walk to each attendee when issuing the first Addendum for the Project and post the attendance and first Addendum on the Current Contracting Opportunities website.

2. CONTRACTOR RESOURCES

The following sources may be contacted for assistance in soliciting subcontractor participation:

Alameda County Contractor Technical Assistance Program (CTAP)

Jennifer Elmore, CTAP Program Manager (Merriwether & Williams Insurance Services)

(510) 740-6922 ext.710 CTAP@imwis.com

Asian American Contractors Association

Juliana Choy Sommer and Stanford Chiang, Executive Committee Members
(415) 928-5910 www.aaca-sf.com

Western Regional Minority Supplier Development Council (WRMSDC) – MBE certifications only -

(510) 686-2555 www.wrmsdc.org

Women’s Business Enterprise National Council (WBENC) – WBE certifications only - www.wbenc.org

California Public Utilities Commission (CPUC) The Supplier Clearinghouse

MBE and WBE vendors and certifications - www.thesupplierclearinghouse.com

Alameda County Transportation Commission

LBE and SLBE vendors and certifications – <https://www.alamedactc.org/get-involved/contract-equity/>

Visit the following County of Alameda GSA websites for

CERTIFIED SMALL LOCAL VENDORS	http://www.acgov.org/sleb_query_app/gsa/sleb/query/slebresultlist.jsp?smEmInd=C
CURRENT CONTRACT OPPORTUNITIES	http://www.acgov.org/gsa_app/gsa/purchasing/bid_content/contractopportunities.jsp
UPCOMING CONTRACT OPPORTUNITIES	https://gsa.acgov.org/do-business-with-us/contracting-opportunities/
CALENDAR OF EVENTS	http://www.acgov.org/calendar_app/DisplayListServlet?site=Internet&ag=GSA&ty=PUR
COUNTY OF ALAMEDA HOME PAGE	http://www.acgov.org/index.htm

END OF DOCUMENT

EXISTING CONDITIONS INFORMATION

1. Summary

This document describes existing conditions at or near the Project, and use of information available regarding existing conditions. This document is **not** part of the Contract Documents. See General Conditions for definition(s) of terms used herein.

2. Reports and Information on Existing Conditions

- 2.1. Documents providing a general description of the Site and conditions of the Work may have been collected by County its consultants, contractors, and tenants. These documents may include previous contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, and information regarding underground facilities.
- 2.2. Information regarding existing conditions may be inspected at the County offices or the Construction Manager's offices, if any, and copies may be obtained at cost of reproduction and handling upon Bidder's agreement to pay for such copies. These reports, documents, and other information are **not** part of the Contract Documents.
- 2.3. Information regarding existing conditions may also be included in the Project Manual but shall **not** be considered part of the Contract Documents.
- 2.4. The reports and other data or information regarding existing conditions and underground facilities at or contiguous to the Project are provided as non-contract documents for Bidder's convenience:
 - 2.4.1. Material Reports.
 - 2.4.2. Juvenile Justice Center Exercise Equipment As-Built Drawings.

3. Use of Information

- 3.1. Information regarding existing conditions was obtained only for use of County and its consultants, contractors, and tenants for planning and design and is **not** part of the Contract Documents.
- 3.2. County does not warrant, and makes no representation regarding, the accuracy or thoroughness of any information regarding existing conditions. Bidder represents and agrees that in submitting a bid it is not relying on any information regarding existing

conditions supplied by County.

- 3.3. Under no circumstances shall County be deemed to warrant or represent existing above-ground conditions, as-built conditions, or other actual conditions, verifiable by independent investigation.
- 3.4. Any information shown or indicated in the reports and other data supplied herein with respect to existing underground facilities at or contiguous to the Project may be based upon information and data furnished to County by the County's employees and/or consultants or builders of such underground facilities or others. County does not assume responsibility for the completeness of this information, and Bidder is solely responsible for any interpretation or conclusion drawn from this information.
- 3.5. County shall be responsible only for the general accuracy of information regarding underground facilities, and only for those underground facilities that are owned by County, and only where Bidder has conducted the independent investigation required of it pursuant to the Instructions to Bidders, and discrepancies are not apparent.

4. Investigations/Site Examinations

- 4.1. Before submitting a Bid, each Bidder is responsible for conducting or obtaining any additional or supplementary examinations, investigations, explorations, tests, studies, and data concerning conditions (surface, subsurface, and underground facilities) at or contiguous to the Site or otherwise, that may affect cost, progress, performance, or furnishing of Work or that relate to any aspect of the means, methods, techniques, sequences, or procedures of construction to be employed by Bidder and safety precautions and programs incident thereto or that Bidder deems necessary to determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of the Contract Documents.
- 4.2. On request, County will provide each Bidder access to the Site to conduct such examinations, and investigations as each Bidder deems necessary for submission of a Bid. Bidders must fill all holes and clean up and restore the Site to its former condition upon completion of its explorations, investigations, tests, and studies. Such investigations and Site examinations may be performed during any and all Site visits indicated in the Notice to Bidders and only under the provisions of the Contract Documents, including, but not limited to, proof of insurance and obligation to indemnify against claims arising from such work, and County's prior approval.

END OF DOCUMENT

BID FORM – STIPULATED SUM (SINGLE-PRIME CONTRACT)

To: The County of Alameda

From: _____
(Proper Name of Bidder)

The undersigned declares that the Contract Documents including, without limitation, the Notice to Bidders Document 00 11 16 and the Instructions to Bidders Document 00 21 13 have been read and agrees and proposes to furnish all necessary labor, materials, and equipment to perform and furnish all work in accordance with the terms and conditions of the Contract Documents, including, without limitation, the Drawings and Specifications of Bid No. 21152.1

PROJECT JUVENILE JUSTICE CENTER (JJC) EXTERIOR EXERCISE EQUIPMENT

(“Project” or “Contract”) and will accept in full payment for that Work the following total lump sum amount, all taxes included:

_____ dollars <i>TOTAL BASE BID</i>

1. **Unit Prices.** The Bidder’s Base Bid includes the following unit prices, which the Bidder must provide and County may, at its discretion, utilize in valuing additive and/or deductive change orders;

NON-APPLICABLE

2. The undersigned has reviewed the Work outlined in the Contract Documents and fully understands the scope of Work required in this Bid, understands the construction and project management function(s) as described in the Contract Documents, and that the Bidder who is awarded a contract shall be a prime contractor, not a subcontractor, to County, and agrees that its Bid, if accepted by County, will be the basis for the Bidder to enter into a contract with County in accordance with the intent of the Contract Documents.
3. The undersigned has notified County in writing of any discrepancies or omissions or of

any doubt, questions, or ambiguities about the meaning of any of the Contract Documents and has contacted the Construction Manager before bid date to verify the issuance of any clarifying Addenda.

4. The undersigned agrees to commence work under this Contract on the date established in the Contract Documents and to complete all work within the time specified in the Contract Documents.
5. The liquidated damages clause of the General Conditions and Agreement is hereby acknowledged.
6. It is understood that County reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of ninety (90) days.
7. Bidder acknowledges that the following documents are included with this Document 00 41 13 and has referred to Document 00 21 13 (Instructions to Bidders) for additional information:
 - a. Document 00 43 13 Bid Security Form or other security
 - b. Document 00 43 36 Designated Subcontractors List
 - c. Document 00 45 01 Site-Visit Certification, if a site visit was required
 - d. Document 00 45 13 Non-Collusion Declaration
 - e. Document 00 52 13.1 Debarment and Suspension Certification Form
 - f. Bidder understands that failure to complete and submit the above documents with this Document 00 41 13 will deem the Bid to be non-responsive, in which case the Bid will be rejected by the County.
8. Receipt and acceptance of the following addenda is hereby acknowledged:

No. ____, Dated _____	No. ____, Dated _____
No. ____, Dated _____	No. ____, Dated _____
No. ____, Dated _____	No. ____, Dated _____
No. ____, Dated _____	No. ____, Dated _____

9. Bidder acknowledges that the license required for performance of the Work is a B license.
10. The undersigned hereby certifies that Bidder is able to furnish labor that can work in

harmony with all other elements of labor employed or to be employed on the Work.

11. The Bidder represents that it is competent, knowledgeable and has special skills with respect to the nature, extent, and inherent conditions of the Work to be performed. Bidder further acknowledges that there are certain peculiar and inherent conditions existent in the construction of the Work that may create, during the Work, unusual or peculiar unsafe conditions hazardous to persons and property.
12. Bidder expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the Work with respect to such hazards.
13. Bidder expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms “claim” and “knowingly” are defined in the California False Claims Act, California Government Code, §12650 et seq.), County will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the Contractor may be subject to criminal prosecution.
14. The undersigned Bidder certifies that it is, at the time of bidding, and shall be throughout the period of the contract, licensed by the State of California to do the type of work required under the terms of the Contract Documents. Bidder further certifies that it is regularly engaged in the general class and type of work called for in the Contract Documents.
15. The undersigned Bidder certifies that it is not, at the time of bidding, on the California Department of General Services list of persons determined to be engaged in investment activities in Iran or otherwise in violation of the Iran Contracting Act of 2010 (Public Contract Code §§2200-2208).

Furthermore, Bidder hereby certifies to County that all representations, certifications, and statements made by Bidder, as set forth in this bid form, are true and correct and are made under penalty of perjury pursuant to the laws of California.

Dated this _____ day of _____ 20 ____

Name of Bidder _____

Type of Organization _____

Signed by _____

Title of Signer _____

Address of Bidder _____

Taxpayer's Identification No. of Bidder _____

Telephone Number _____

Fax Number _____

E-mail _____ Web page _____

Contractor's License No(s): No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

No.: _____ Class: _____ Expiration Date: _____

Department of Industrial Relations Registration Number: _____

If Bidder is a corporation, affix corporate seal.

Name of Corporation: _____

President: _____

Secretary: _____

Treasurer: _____

Manager: _____

END OF DOCUMENT

BID SECURITY FORM

(Bid Bond)

(Note: If Bidder is providing a bid bond as its bid security, Bidder must use this form, NOT a surety company form.)

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned, as _____ as Principal (“Principal”),
and _____ as Surety (“Surety”),

a corporation organized and existing under and by virtue of the laws of the State of _____
and authorized to do business as a surety in the State of California, are held and firmly bound
unto the County of Alameda, State of California as Obligee, in the sum of
_____ (\$ _____)

lawful money of the United States of America, for the payment of which sum well and truly to
be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors, and
assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted
a bid to County for all Work specifically described in the accompanying bid;

Now, therefore, if the Principal is awarded the Contract and, within the time and manner required
under the Contract Documents, after the prescribed forms are presented to Principal for
signature, enters into a written contract, in the prescribed form in accordance with the bid, and
files two bonds, one guaranteeing faithful performance and the other guaranteeing payment for
labor and materials as required by law, and meets all other conditions to the contract between the
Principal and the Obligee becoming effective, or if the Principal shall fully reimburse and save
harmless the Obligee from any damage sustained by the Obligee through failure of the Principal
to enter into the written contract and to file the required performance and labor and material
bonds, and to meet all other conditions to the Contract between the Principal and the Obligee
becoming effective, then this obligation shall be null and void; otherwise, it shall be and remain
in full force and effect. The full payment of the sum stated above shall be due immediately if
Principal fails to execute the Contract within seven (7) days of the date of the County’s Notice of
Award to Principal.

Surety, for value received, hereby stipulates and agrees that no change, extension of time,
alteration or addition to the terms of the Contract or the call for bids, or to the work to be
performed thereunder, or the specifications accompanying the same, shall in any way affect its
obligation under this bond, and it does hereby waive notice of any such change, extension of

time, alteration or addition to the terms of the Contract or the call for bids, or to the work, or to the specifications.

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

If the County awards the bid, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (90) days after the date of the bid opening.

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

(Affix Corporate Seal)

Principal

By

(Affix Corporate Seal)

Surety

By

Name of California Agent of Surety

Address of California Agent of Surety

Telephone Number of California Agent of Surety

Bidder must attach Power of Attorney and Certificate of Authority for Surety and a Notarial Acknowledgment for all Surety's signatures. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.

END OF DOCUMENT

DESIGNATED SUBCONTRACTORS LIST

PROJECT: Juvenile Justice Center (JJC) Exterior Exercise Equipment

Bidder must list hereinafter the name and location of each subcontractor who will be employed, and the kind of Work that each will perform if the Contract is awarded to the Bidder. Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., it must clearly set forth below the name and location of each subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the Work in an amount in excess of one-half of one percent (1/2 of 1%) of Bidder's total Bid, and that as to any Work that Bidder fails to list, Bidder agrees to perform that portion itself or be subjected to penalty under applicable law.

In case more than one subcontractor is named for the same kind of Work, state the portion that each will perform. Vendors or suppliers of materials only do not need to be listed.

If further space is required for the list of proposed subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of this document.

Name and City of Subcontractor (1)	Description of Work: Reference to Contract Items (1)	Prices Under Subcontract (1)	Subcontractor's License Numbers		
			State of California Contractor's License (1)	Dept. of Industrial Relations Registration No. (DIR) (1)	Business License and City/County Issued (1)

(Bidder to attach additional sheet(s) if necessary)

(1) Submit this information with sealed bid.

END OF DOCUMENT

SITE-VISIT CERTIFICATION

For Projects Where A Site Visit Was Mandatory

PROJECT: **Juvenile Justice Center (JJC) Exterior Exercise Equipment**

Check whichever option applies:

_____ I certify that I visited the Site of the proposed Work and became fully acquainted with the conditions relating to construction and labor. I fully understand the facilities, difficulties, and restrictions attending the execution of the Work under contract.

_____ I certify that _____ (Bidder's representative) visited the Site of the proposed Work and became fully acquainted with the conditions relating to construction and labor. The Bidder's representative fully understood the facilities, difficulties, and restrictions attending the execution of the Work under contract.

Bidder agrees to fully indemnify the County of Alameda, its Architect, its Engineer, its Construction Manager, and all of their respective officers, agents, employees, and consultants from any damages, or omissions, related to conditions that could have been identified during my visit and/or the Bidder's representative's visit to the Site.

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Date: _____

Proper Name of Bidder: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

Proper Name of Bidder: _____

Signature: _____

Print Name: _____

Title: _____

(ATTACH NOTARIAL ACKNOWLEDGMENT FOR THE ABOVE SIGNATURE)

END OF DOCUMENT

WORKERS' COMPENSATION CERTIFICATION

PROJECT/CONTRACT NO.: 21152.1 - Juvenile Justice Center (JJC) Exterior Exercise Equipment between County of Alameda (the "County" or the "Owner") and _____ (the "Contractor" or the "Bidder") (the "Contract" or the "Project").

Labor Code § 3700 in relevant part provides:

Every employer except the State shall secure the payment of compensation in one or more of the following ways:

- a. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this state.
- b. By securing from the Director of Industrial Relations a certificate of consent to self-insure either as an individual employer, or as one employer in a group of employers, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to their employees.

I am aware of the provisions of § 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the Work of this Contract.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

(In accordance with Article 5 - commencing at § 1860, chapter 1, part 7, division 2 of the Labor Code, the above certificate must be signed and filed with the awarding body prior to performing any Work under this Contract.)

END OF DOCUMENT

**PREVAILING WAGE AND
RELATED LABOR REQUIREMENTS CERTIFICATION**

PROJECT/CONTRACT NO.: 21152.1 - Juvenile Justice Center (JJC) Exterior Exercise
Equipment between County of Alameda (the "County" or the "Owner") and _____
(the "Contractor" or the "Bidder") (the "Contract" or the "Project").

I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hours' notice, payroll records, and apprentice and trainee employment requirements, for all Work on the above Project.

I hereby acknowledge that County will use the Alameda County Contract Compliance System, including the Elation Systems, Inc. program, to monitor contract labor compliance and Local Hiring Program compliance monitoring. Contractor shall use these Compliance Systems to meet County's requirements and shall participate in training as directed by County to become and remain competent in the use of the Compliance Systems. Costs associated with the Alameda County Contract Compliance System, including the Elation Systems, Inc. programs, shall be borne by Contractor and shall not increase the cost of the Contract.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

HAZARDOUS MATERIALS CERTIFICATION

PROJECT/CONTRACT NO.: 21152.1 - Juvenile Justice Center (JJC) Exterior Exercise Equipment (“Contract” or “Project”) between the County of Alameda (“County”) and _____ (“Contractor”)

1. Contractor hereby certifies that no Asbestos, or Asbestos-Containing Materials, polychlorinated biphenyl (PCB), or any material listed by the federal or state Environmental Protection Agency or federal or state health agencies as a hazardous material, or any other material defined as being hazardous under federal or state laws, rules, or regulations (“New Hazardous Material”), shall be furnished, installed, or incorporated in any way into the Project or in any tools, devices, clothing, or equipment used to affect any portion of Contractor's work on the Project for County.
2. Contractor further certifies that it has instructed its employees with respect to the above-mentioned standards, hazards, risks, and liabilities.
3. Asbestos and/or asbestos-containing material shall be defined as all items containing detectable amounts of, but not limited to, chrysotile, crocidolite, amosite, anthophyllite, tremolite, and actinolite.
4. Any disputes involving the question of whether or not material is New Hazardous Material shall be settled by electron microscopy or other appropriate and recognized testing procedure, at the County’s determination. The costs of any such tests shall be paid by Contractor if the material is found to be New Hazardous Material.
5. All Work or materials found to be New Hazardous Material or Work or material installed with equipment containing “New Hazardous Material” will be immediately rejected and this Work will be removed at Contractor's expense at no additional cost to the County.
6. Contractor has read and understood the document Hazardous Materials Procedures & Requirements and shall comply with all the provisions outlined therein.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

END OF DOCUMENT

NOTICE OF AWARD

Dated: _____ 20__

To: _____
(Contractor)

To: _____
(Address)

From: The County of Alameda

PROJECT: **Juvenile Justice Center (JJC) Exterior Exercise Equipment**

(“Project” or “Contract”).

Contractor has been awarded the referenced Contract on _____, 20__, by action of the County's Board of Supervisors.

The Contract Price is _____ Dollars (\$_____).

Three (3) copies of each of the Contract Documents (except Drawings) accompany this Notice of Award. Three (3) sets of the Drawings will be delivered separately or otherwise made available. Additional copies are available at cost of reproduction.

The Bidder to whom Contract is awarded shall execute and submit the following documents by 5:00 p.m. of the **SEVENTH (7TH)** Calendar Day following the date of the Notice of Award. Failure to properly and timely submit these documents entitles County to reject the bid as non-responsive.

- a. Agreement: To be executed by successful Bidder. Submit four (4) copies, each bearing an original signature.
- b. Escrow of Bid Documentation: This must include all required documentation. See the document 00 61 30 Escrow of Bid Documentation for more information.
- c. Performance Bond (100%): On the form provided in the Contract Documents and fully executed as indicated on the form.
- d. Payment Bond (100%) (Contractor's Labor and Material Payment Bond): On the form provided in the Contract Documents and fully executed as indicated on the

- form.
- e. Insurance Certificates and Endorsements as required.
- f. Workers' Compensation Certification.
- g. Prevailing Wage and Related Labor Requirements Certification.
- h. Hazardous Materials Certification.
- i. Completed, signed Document 00 52 13.1 Debarment and Suspension Certification Form.
- j.

Failure to comply with these conditions within the time specified will entitle County to consider your bid abandoned, to annul this Notice of Award, and to declare your Bid Security forfeited, as well as any other rights the County may have against the Contractor.

After you comply with those conditions, County will return to you one fully signed counterpart of the Agreement.

County of Alameda

BY: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

NOTICE OF INTENT TO AWARD

[DATE]

[NAME]

[COMPANY]

[ADDRESS]

[CITY, STATE ZIP]

SUBJECT: INTENT TO AWARD A CONTRACT FOR PROJECT NO. 21152.1

Thank you for your participation in this solicitation and interest in the County of Alameda. Based on its evaluation and acceptance of the bids submitted, GSA will be recommending to its Board of Supervisors that the contract for project number 21152.1 be awarded to [CONTRACTOR].

GSA's recommendation to accept and award a contract should go before the Board on Tuesday, [DATE]. Upon Board approval a draft contract will be submitted to the awardee for review. A signed contract will be issued along with an Agreement Form and Notice to Proceed. The County is unable to pay for goods received or services performed without a signed contract.

Below is a summary of all bids/proposals received for this project.

Bidder	Location	Bid Price*

Please refer to Document 00 21 13 – Instructions to Bidders for additional information.

For information on other contracting opportunities please visit our websites at http://www.acgov.org/gsa/purchasing/bid_content/FutureContractOpportunities.jsp for

Upcoming Contracting Opportunities and http://www.acgov.org/gsa/purchasing/bid_content/ContractOpportunities.jsp for Current Contracting Opportunities.

County of Alameda

BY: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

AGREEMENT FORM – STIPULATED SUM
(SINGLE-PRIME CONTRACT)

THIS AGREEMENT IS MADE AND ENTERED INTO THIS _____ DAY OF _____, 20____, by and between the County of Alameda (“County”) and _____ (“Contractor”) (“Agreement”).

WITNESSETH: That the parties hereto have mutually covenanted and agreed, and by these presents do covenant and agree with each other, as follows:

1. **The Work:** Contractor agrees to furnish all tools, equipment, apparatus, facilities, labor, and material necessary to perform and complete in a good and workmanlike manner the work of

PROJECT: Juvenile Justice Center (JJC) Exterior Exercise Equipment
 (“Project” or “Contract” or “Work”)

for which the Drawings and Specifications are identified by the signature of the parties to this Agreement. It is understood and agreed that the Work shall be performed and completed as required in the Contract Documents including, without limitation, the Drawings and Specifications, under the direction and supervision of, and subject to, the approval of County or its authorized representative.

2. **The Contract Documents:** The complete Contract consists of all Contract Documents as defined in the General Conditions and incorporated herein by this reference. Any and all obligations of the County and Contractor are fully set forth and described in the Contract Documents. All Contract 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 Contract Documents.

3. **Interpretation of Contract Documents:** Should any question arise concerning the intent or meaning of Contract Documents, including the Drawings or Specifications, the question shall be submitted to the County for interpretation. If a conflict exists in the Contract Documents, modifications, beginning with the most recent, shall control over this Agreement, which shall control over the Special Conditions, which shall control over the General Conditions, which shall control over the remaining Division 00 documents, which shall control over Division 01 Documents, which shall control over Division 02 through Division 49 documents, which shall control over figured dimensions, which shall control over large-scale drawings, which shall control over small-scale drawings. In no case shall a document calling for lower quality and/or quantity material or workmanship control. The decision of the County in the matter shall be final.

4. **Time For Completion** It is hereby understood and agreed that the work under this contract shall be completed within two hundred fifty-seven consecutive calendar days (“Contract Time”) from the date specified in the County’s Notice to Proceed.

Contractor acknowledges that time is of the essence with respect to the Completion of the Work and the performance of this Agreement and that the County will be damaged by any delay in completing any of the major phases of the Project listed in paragraphs 4.1, 4.2, and 4.3 below. Therefore, Contractor accepts the following Completion obligations:

- 4.1 Contractor shall achieve Substantial Completion no later than (257) calendar days after the commencement date set forth in the Notice to Proceed, and Final Completion of the Project no later than forty-five (45) calendar days after the date by which Contractor achieves Substantial Completion (“Contract Time”).
- 4.2 Following the issuance by the permitting agency of a permit allowing the Contractor to commence construction of the Project, the Contractor shall update the Project Master Schedule in accordance with Document 01 32 16 (Schedules and Reports). The County is under no obligation to accept an updated Project Master Schedule that shows Contractor achieving Substantial Completion later than the Contract Time specified in Paragraph 4.1 of this Document 00 52 13.
- 4.3 In addition to achieving Completion, Contractor shall fully cooperate with the County so that the County may obtain all necessary Regulatory Agency approvals required to operate the Project.

5. **Completion-Extension of Time:** Should the Contractor fail to complete this Contract, and the Work provided herein, within the time fixed for completion, due allowance being made for the contingencies provided for herein, the Contractor shall become liable to the County for all loss and damage that the County may suffer on account thereof. The Contractor shall coordinate its work with the Work of all other contractors. County shall not be liable for delays resulting from Contractor's failure to coordinate its Work with other contractors in a manner that will allow timely completion of Contractor's Work. Contractor shall be liable for delays to other contractors caused by Contractor's failure to coordinate its Work with the work of other contractors.

6. **Liquidated Damages:** It is hereby understood and agreed that it is and will be difficult and/or impossible to ascertain and determine the actual damage that County will sustain in the event of and by reason of Contractor's delay; therefore, Contractor agrees that it shall pay to the County the sum of One Thousand, Five Hundred dollars (\$1,500) per day as liquidated damages for each and every day's delay beyond the time herein prescribed in finishing the Work. It is hereby understood and agreed that this amount is not a penalty.

In the event any portion of the liquidated damages is not paid to County, County may deduct that amount from any money due or that may become due to the Contractor under this Agreement. County's right to assess liquidated damages is as indicated herein and in the General Conditions.

The time during which the Contract is delayed for cause as hereinafter specified may extend the time of completion for a reasonable time as County may grant. This provision does not exclude the recovery of damages for delay by either party under other provisions in the Contract Documents.

7. **Indemnity:** To the fullest extent permitted by law (including, without limitation, California Civil Code Section 2782), Contractor shall defend (with legal counsel reasonably acceptable to the County), indemnify and hold harmless County and its officers, agents, departments, officials, representatives and employees (collectively "Indemnitees") from and against any and all claims, loss, cost, damage, injury (including, without limitation, injury to or death of an employee of Contractor or its Subcontractors), expense and liability of every kind, nature and description (including, without limitation, incidental and consequential damages, court costs, attorneys' fees, litigation expenses and fees of expert consultants or expert witnesses incurred in connection therewith and costs of investigation) which arises out of or is in any way connected to the performance of this agreement (collectively "Liabilities") except where such Liabilities are caused solely by the negligence or willful misconduct of any indemnitee. The County may participate in the defense of any such claim without relieving Contractor of any obligation hereunder. This indemnification, defense, and hold harmless obligation includes any failure or alleged failure by Contractor to comply with any provision of law or the Contract Documents, including, without limitation, any stop notice actions or liens by the California Department of Labor Standards Enforcement. This indemnity obligation shall be for the full amount of all damage to County, including defense costs, and shall not be limited by any insurance limits.

7.1 Contractor shall defend (with legal counsel reasonably acceptable to the County), indemnify and hold harmless the Indemnitees from all loss, cost, damage, expense, liability or claims, in law or in equity, including attorneys' fees, court costs, litigation expenses and fees of expert consultants or expert witnesses, that may at any time arise for any infringement of the patent rights, copyright, trade secret, trade name, trademark, service mark or any other proprietary right of any person or persons in consequence of the use by County, or any of the other Indemnitees, of articles or Services to be supplied in the performance of this Agreement.

7.2 Contractor shall place in its subcontracting agreements and cause its Subcontractors to agree to indemnities and insurance obligations in favor of County and other Indemnitees in the exact form and substance of those contained in this Agreement. Contractor shall require all subcontractors to comply with all

indemnification and insurance requirements of this Agreement, including, without limitation, requirements contained in Document 00 72 13 (General Conditions) and Document 00 73 13 (Special Conditions). Contractor shall verify subcontractor's compliance.

8. **Loss Or Damage:** County and its authorized representatives shall not in any way or manner be answerable or suffer loss, damage, expense, or liability for any loss or damage that may happen to the Work, or any part thereof, or in or about the same during its construction and before acceptance, and the Contractor shall assume all liabilities of every kind or nature arising from the Work, either by accident, negligence, theft, vandalism, or any cause whatever; and shall hold County and its authorized representatives harmless from all liability of every kind and nature arising from accident, negligence, or any cause whatever.
9. **Insurance and Bonds:** Contractor shall provide all required certificates of insurance and payment and performance bonds as evidence thereof.
10. **Prosecution of Work:** If the Contractor should neglect to prosecute the Work properly or fail to perform any provisions of this contract, County may, pursuant to the General Conditions and without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.
11. **Authority of Architect:** Contractor hereby acknowledges that the Architect has authority to approve and/or stop Work if the Contractor's Work does not comply with the requirements of the Contract Documents and all applicable laws. The Contractor shall be liable for any delay caused by its non-compliant Work.
12. **Assignment of Contract:** Neither the Contract, nor any part thereof, nor any moneys due or to become due thereunder, may be assigned by the Contractor without the written approval of the County, nor without the written consent of the Surety on the Contractor's Performance Bond (the "Surety"), unless the Surety has waived in writing its right to notice of assignment.
13. **Classification Of Contractor's License:** Contractor hereby acknowledges that it currently holds valid Type B Contractor's license(s) issued by the State of California, Contractor's State Licensing Board, in accordance with division 3, chapter 9, of the Business and Professions Code and in the classification called for in the Contract Documents.
14. **Payment of Prevailing Wages:** The Contractor and all Subcontractors under the Contractor shall pay all workers on all Work performed pursuant to this Contract not less than the general prevailing rate of per diem wages and the general prevailing rate for

holiday and overtime work as determined by the Director of the Department of Industrial Relations, State of California, for the type of work performed and the locality in which the work is to be performed within the boundaries of County, pursuant to §§1770 et seq. of the California Labor Code. Copies of the prevailing rate of per diem wages are on file at the Alameda County General Services Agency, 1401 Lakeside Drive, Oakland, 8th Floor, California 94612, and will be made available to any interested party upon request.

14.1 The Contractor acknowledges and agrees that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The following requirements apply to this contract:

14.1.1 No contractor or subcontractor may be listed on a bid proposal for a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code § 1725.5 (with limited exceptions from this requirement for bid purposes only under Labor Code § 1771.1(a)).

14.1.2 No contractor or subcontractor may be awarded a contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code § 1725.5.

15. Contract Price: In consideration of the foregoing covenants, promises, and agreements on the part of the Contractor, and the strict and literal fulfillment of each and every covenant, promise, and agreement, and as compensation agreed upon for the Work and construction, erection, and completion as aforesaid, County covenants, promises, and agrees that it will well and truly pay and cause to be paid to the Contractor in full, and as the full Contract Price and compensation for construction, erection, and completion of the Work hereinabove agreed to be performed by the Contractor, the following price:

Dollars

_____)
(\$ _____),

in lawful money of the United States, which sum is to be paid according to the schedule provided by the Contractor and accepted by County and subject to additions and deductions as provided in the Contract. This amount supersedes any previously stated and/or agreed to amount(s).

16. Severability: If any term, covenant, condition, or provision in any of the Contract Documents is held by a court of competent jurisdiction to be invalid, void or unenforceable, the remainder of the provisions in the Contract Documents shall remain in full force and effect and shall in no way be affected, impaired, or invalidated thereby.

17. Contractor Registration: Contractor represents that it is registered and qualified to perform public work pursuant to Labor Code § 1725.5. Contractor is required to maintain

DIR registration as required by Labor Code § 1725.5, without interruption, as long as Contractor is performing work on the Project. Contractor is further obligated to ensure that subcontractors of every tier are registered with the DIR as required by Labor Code § 1725.5 as long as those subcontractors are performing work on the Project. Contractor will prohibit any unregistered subcontractor from performing work on the Project.

IN WITNESS WHEREOF, accepted and agreed on the date indicated above:

CONTRACTOR

COUNTY OF ALAMEDA

By: _____

By: _____

Title: _____

Title: _____

NOTE: If the party executing this Contract is a corporation, a certified copy of the by-laws, or of the resolution of the Board of Directors, authorizing the officers of said corporation to execute the Contract and the bonds required thereby must be attached hereto.

Approved as to form:

DONNA R. ZIEGLER, COUNTY COUNSEL

By: _____

Name: _____ Title: (Deputy) County Counsel

END OF DOCUMENT

COUNTY OF ALAMEDA
DEBARMENT AND SUSPENSION CERTIFICATION FORM

The bidder, under penalty of perjury, certifies that, except as noted below, bidder, its Principal, and any named and unnamed subcontractor:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency;
- Has not been suspended, debarred, voluntarily excluded or determined ineligible by any federal agency within the past three years;
- Does not have a proposed debarment pending; and
- Has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.

BIDDER: _____

PRINCIPAL: _____

TITLE: _____

SIGNATURE: _____

DATE: _____

NOTICE TO PROCEED

Dated: _____, 20__

TO: _____
(Contractor)

ADDRESS: _____

PROJECT: Juvenile Justice Center (JJC) Exercise Equipment

PROJECT/CONTRACT NO.: **21152.1 - Juvenile Justice Center (JJC) Exterior Exercise Equipment** between County of Alameda and Contractor (“Contract”).

You are notified that the Contract Time under the above Contract will commence to run on _____, 2024__. By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement executed by Contractor, the date of completion is **257 calendar days** from the date of this Notice to Proceed.

You must submit the following documents by 5:00 p.m. of the **TENTH (10TH)** business day following the date of this Notice to Proceed:

- a. Contractor’s preliminary schedule of construction.
- b. Contractor’s preliminary schedule of values for all of the Work.
- c. Contractor’s preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals
- d. Contractor’s Safety Plan specifically adapted for the Project.
- e. A complete subcontractors list, including the name, address, telephone number, facsimile number, email address, California State Contractors License number, classification, and monetary value of all Subcontracts.

f. Construction Waste Management Plan.

Thank you. We look forward to a very successful Project.

COUNTY OF ALAMEDA

BY: _____

NAME: _____

TITLE: _____

END OF DOCUMENT

ESCROW OF BID DOCUMENTATION

1. Requirement to Escrow Bid Documentation

- a. Contractor shall submit, within **SEVEN (7)** calendar days after the date of the Notice of Award, one copy of all documentary information received or generated by Contractor in preparation of bid prices for this Contract, as specified herein. This material is referred to herein as "Escrow Bid Documentation." The Escrow Bid Documentation of the Contractor will be held in escrow for the duration of the Contract.
- b. Contractor agrees, as a condition of award of the Contract, that the Escrow Bid Documentation constitutes all written information used in the preparation of its bid, and that no other written bid preparation information shall be considered in resolving disputes or claims. Contractor also agrees that nothing in the Escrow Bid Documentation shall change or modify the terms or conditions of the Contract Documents.
- c. The Escrow Bid Documentation will not be opened by County except as indicated herein. The Escrow Bid Documentation will be used only for the resolution of change orders and claims disputes.
- d. Contractor's submission of the Escrow Bid Documentation, as with the bonds and insurance documents required, is considered an essential part of the Contract award. Should the Contractor fail to make the submission within the allowed time specified above, County may deem the Contractor to have failed to enter into the Contract, and the Contractor shall forfeit the amount of its bid security, accompanying the Contractor's bid, and County may award the Contract to the next lowest responsive responsible bidder.
- e. NO PAYMENTS WILL BE MADE, NOR WILL COUNTY ACCEPT PROPOSED CHANGE ORDERS UNTIL THE ABOVE REQUIRED INFORMATION IS SUBMITTED AND APPROVED.
- f. The Escrow Bid Documentation shall be submitted in person by an authorized representative of the Contractor to County.

2. Ownership of Escrow Bid Documentation

- a. The Escrow Bid Documentation is, and shall always remain, the property of Contractor, subject to review by County, as provided herein.
- b. Escrow Bid Documentation constitute trade secrets, not known outside Contractor's business, known only to a limited extent and only by a limited

number of employees of Contractor, safeguarded while in Contractor's possession, extremely valuable to Contractor, and could be extremely valuable to Contractor's competitors by virtue of it reflecting Contractor's contemplated techniques of construction. Subject to the provisions herein, County agrees to safeguard the Escrow Bid Documentation, and all information contained therein, against disclosure to the fullest extent permitted by law.

3. Format and Contents of Escrow Bid Documentation

- a. Contractor may submit Escrow Bid Documentation in its usual cost-estimating format; a standard format is not required. The Escrow Bid Documentation shall be submitted in the English language.
- b. Escrow Bid Documentation must clearly itemize the estimated costs of performing the work of each bid item contained in the bid schedule, separating bid items into sub-items as required to present a detailed cost estimate and allow a detailed cost review. The Escrow Bid Documentation shall include all subcontractor bids or quotes, supplier bids or quotes, quantity takeoffs, crews, equipment, calculations of rates of production and progress, copies of quotes from subcontractors and suppliers, and memoranda, narratives, add/deduct sheets, and all other information used by the Contractor to arrive at the prices contained in the bid proposal. Estimated costs should be broken down into Contractor's usual estimate categories such as direct labor, repair labor, equipment ownership and operation, expendable materials, permanent materials, and subcontract costs as appropriate. Plant and equipment and indirect costs should be detailed in the Contractor's usual format. The Contractor's allocation of indirect costs, contingencies, markup, and other items to each bid item shall be identified.
- c. All costs shall be identified. For bid items amounting to less than \$10,000, estimated unit costs are acceptable without a detailed cost estimate, provided that labor, equipment, materials, and subcontracts, as applicable, are included and provided that indirect costs, contingencies, and markup, as applicable, are allocated.
- d. Bid Documentation provided by County should not be included in the Escrow Bid Documentation unless needed to comply with the following requirements.

4. Submittal of Escrow Bid Documentation

- a. The Escrow Bid Documentation shall be submitted by the Contractor in a sealed container within **SEVEN (7)** calendar days after the date of the Notice of Award. The Escrow Bid Documentation shall be delivered to 1401 Lakeside Drive #800, Oakland, CA, 94612 Attn. GSA – Capital Programs. The container shall be clearly marked on the outside with the Contractor's name, date of submittal, project name and the words "Escrow Bid Documentation – Intended to be opened

in the presence of Authorized Representatives of Both County and Contractor".

- b. By submitting Escrow Bid Documentation, Contractor represents that the material in the Escrow Bid Documentation constitutes all the documentary information used in preparation of the bid and that the Contractor has personally examined the contents of the Escrow Bid Documentation container and has found that the documents in the container are complete.
- c. If Contractor's proposal is based upon subcontracting any part of the work, each subcontractor whose total subcontract price exceeds 5 percent of the total contract price proposed by Contractor, shall provide separate Escrow Documents to be included with those of Contractor. Those documents shall be opened and examined in the same manner and at the same time as the examination described above for Contractor.
- d. If Contractor wishes to subcontract any portion of the Work after award, County retains the right to require Contractor to submit Escrow Documents for the Subcontractor before the subcontract is approved.

5. Storage, Examination and Final Disposition of Escrow Bid Documentation

- a. The Escrow Bid Documentation will be placed in escrow, for the life of the Contract, in a mutually agreeable institution. The cost of storage will be paid by Contractor for the duration of the project until final Contract payment and the final resolution of all claims and disputes arising out of or relating to the Work or the Contract. The storage facilities shall be the appropriate size for all the Escrow Bid Documentation and located conveniently to both County's and Contractor's offices.
- b. The Escrow Bid Documentation shall be examined by both County and Contractor, at any time deemed necessary by either County or Contractor, to assist in the negotiation of price adjustments and change orders or the settlement of disputes and claims. In the case of legal proceedings, Escrow Bid Documentation shall be used subject to the terms of an appropriate protective order if requested by Contractor and ordered by a court of competent jurisdiction. Examination of the Escrow Bid Documentation is subject to the following conditions:
 - (1) As trade secrets, the Escrow Bid Documentation is proprietary and confidential to the extent allowed by law.
 - (2) County and Contractor shall each designate, in writing to the other party **SEVEN (7)** calendar days prior to any examination, the names of representatives who are authorized to examine the Escrow Bid Documentation. No other person shall have access to the Escrow Bid Documentation.

- (3) Access to the documents may take place only in the presence of duly designated representatives of the County and Contractor. If Contractor fails to designate a representative or appear for joint examination on **SEVEN (7)** calendar days' notice, then the County representative may examine the Escrow Bid Documents alone upon an additional **THREE (3)** calendar days' notice if a representative of the Contractor does not appear at the time set.
 - (4) If a subcontractor has submitted sealed information to be included in the Escrow Bid Documents, access to those documents may take place only in the presence of a duly designated representative of the County, Contractor and that subcontractor. If that subcontractor fails to designate a representative or appear for joint examination on **SEVEN (7)** calendar days' notice, then the County representative and/or the Contractor may examine the Escrow Bid Documentation without that subcontractor present upon an additional **THREE (3)** calendar days' notice if a representative of that subcontractor does not appear at the time set.
- c. The Escrow Bid Documentation will be returned to Contractor at such time as the Contract has been completed and final settlement has been achieved.

END OF DOCUMENT

**ESCROW AGREEMENT FOR
SECURITY DEPOSITS IN LIEU OF RETENTION**

Public Contract Code Section 22300

This Escrow Agreement ("Escrow Agreement") is made and entered into this ____ day of _____, 20 __, by and between County of Alameda, whose address is 1401 Lakeside Drive, Suite 800, Oakland, California ("County"); and

_____, whose place of business is located at _____, ("Contractor"); and

_____, a state or federally chartered bank in the state of California, whose place of business is located at _____, ("Escrow Agent").

For the consideration hereinafter set forth, County, Contractor, and Escrow Agent agree as follows:

1. Pursuant to section 22300 of Public Contract Code of the State of California, which is hereby incorporated by reference, Contractor has the option to deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by County pursuant to the Construction Contract No. _____ entered into between County and Contractor for the **Juvenile Justice Center (JJC) Exterior Exercise Equipment**, in the amount of _____ dated _____, 2023 __, (the "Contract"). Alternatively, on written request of Contractor, County shall make payments of the retention earnings directly to Escrow Agent. When Contractor deposits the securities as a substitute for Contract earnings, Escrow Agent shall notify County within ten (10) calendar days of the deposit. The market value of the securities at the time of substitution and at all times from substitution until the termination of the Escrow Agreement shall be at least equal to the cash amount then required to be withheld as retention under terms of Contract between County and Contractor.

Securities shall be held in name of County of Alameda and shall designate Contractor as beneficial owner.

2. County shall make progress payments to Contractor for those funds which otherwise would be withheld from progress payments pursuant to Contract provisions, provided that Escrow Agent holds securities in form and amount specified above.
3. When County makes payment of retention earned directly to Escrow Agent, Escrow Agent shall hold them for the benefit of Contractor until the time that the escrow created under this Escrow Agreement is terminated. Contractor may direct the investment of the

payments into securities. All terms and conditions of this Escrow Agreement and the rights and responsibilities of the Parties shall be equally applicable and binding when County pays Escrow Agent directly.

4. Contractor shall be responsible for paying all fees for the expenses incurred by Escrow Agent in administering the Escrow Account, and all expenses of County. These expenses and payment terms shall be determined by County, Contractor, and Escrow Agent.
5. Interest earned on securities or money market accounts held in escrow and all interest earned on that interest shall be for sole account of Contractor and shall be subject to withdrawal by Contractor at any time and from time to time without notice to County.
6. Contractor shall have the right to withdraw all or any part of the principal in the Escrow Account only by written notice to Escrow Agent accompanied by written authorization from County to Escrow Agent that County consents to withdrawal of amount sought to be withdrawn by Contractor.
7. County shall have the right to draw upon the securities and/or withdraw amounts from the Escrow Account in event of default by Contractor. Upon seven (7) days written notice to Escrow Agent from County of the default, if applicable, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by County.
8. Upon receipt of written notification from County certifying that the Contract is final and complete, and that Contractor has complied with all requirements and procedures applicable to the Contract, Escrow Agent shall release to Contractor all securities and interest on deposit less escrow fees and charges of the Escrow Account. The escrow shall be closed immediately upon disbursement of all monies and securities on deposit and payments of fees and charges.
9. Escrow Agent shall rely on written notifications from County and Contractor pursuant to Paragraphs 5 through 8, inclusive, of this Escrow Agreement and County and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth above.
10. Names of persons who are authorized to give written notice or to receive written notice on behalf of County and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows:

On behalf of County:

On behalf of Contractor:

Title

Title

Name

Name

Signature

Signature

Address

Address

On behalf of Escrow Agent:

Title

Name

Signature

Address

At the time of Escrow Account is opened, County and Contractor shall deliver to Escrow Agent a fully executed of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement by their proper officers on the date first set forth above.

On behalf of County:

On behalf of Contractor:

Title

Title

Name

Name

Signature

Signature

Address

Address

On behalf of Escrow Agent:

Title

Name

Signature

Address

END OF DOCUMENT

PERFORMANCE BOND FORM
(100% of Contract Price)

(Note: Bidders must use this form, NOT a surety company form.)

KNOW ALL PERSONS BY THESE PRESENTS:

That WHEREAS, the Board of Supervisors of the County of Alameda (“County”) and _____, (“Principal”) have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

Juvenile Justice Center (JJC) Exterior Exercise Equipment (“Project” or “Contract”)

which Contract dated _____, 2023____, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

And WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract;

NOW, THEREFORE, the Principal and _____ (“Surety”) are held and firmly bound unto the Board of County 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, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to perform all the work required to complete the Project and to pay to County all damages County incurs as a result of the Principal’s failure to perform all the Work required to complete the Project.

The condition of the obligation is such that, if the above bounden Principal, his 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 agreements in the Contract and any alteration thereof made as therein provided, on his or their part to be kept and performed at the time and in the intent and meaning, and shall indemnify and save harmless County, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and

Surety above named, on the ____ day of _____, 20____.

(Affix Corporate Seal)

Principal

By

Surety

By

Name of California Agent of Surety

Address of California Agent of Surety

Telephone Number of California Agent of Surety

Bidder must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

END OF DOCUMENT

PAYMENT BOND FORM
Contractor's Labor & Material Payment Bond
(100% of Contract Price)

(Note: Bidders must use this form, NOT a surety company form.)

KNOW ALL PERSONS BY THESE PRESENTS:

That WHEREAS, the Board of Supervisors of the County of Alameda ("County") and _____, ("Principal") have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to

Juvenile Justice Center (JJC) Exterior Exercise Equipment which Contract dated _____, 2023, and all of the Contract Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof, and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to 100 percent (100%) of the Maximum Contract Value, to secure the claims to which reference is made in sections 9000, 9100, 9356 through 9560, and 9564 of the Civil Code of California, and division 2, part 7, of the Labor Code of California.

NOW, THEREFORE, WE, the Principal and _____, ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of _____ Dollars (\$ _____), lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the Principal or any of his or its subcontractors, of the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, provender, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under sections 9000, 9100, 9356

through 9560, and 9564 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise, it shall be and remain in full force and affect.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of Contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the _____ day of _____, 20__.

(Affix Corporate Seal)

Principal

By

Surety

By

Name of California Agent of Surety

Address of California Agent of Surety

Telephone Number of California Agent of Surety

Bidder must attach a Notarial Acknowledgment for all Surety's signatures and a Power of Attorney and Certificate of Authority for Surety. The California Department of Insurance must authorize the Surety to be an admitted surety insurer.

END OF DOCUMENT

FINAL SETTLEMENT CERTIFICATE FORM

THIS FINAL SETTLEMENT AGREEMENT AND RELEASE OF CLAIMS (“Agreement and Release”) is made and entered into this _____ day of _____, 20__ by and between the County of Alameda (“County”) and _____ (“Contractor”), whose place of business is _____.

RECITALS:

- 1. County and Contractor entered into **Juvenile Justice Center (JJC) Exterior Exercise Equipment / 21152.1** (“Contract” or “Project”) in the County of Alameda, California.
- 2. The Work under the Contract has been completed.

NOW, THEREFORE, it is mutually agreed between County and Contractor as follows:

AGREEMENT

- 3. Contractor will only be assessed liquidated damages as detailed below:

Original Contract Sum	\$ _____
Modified Contract Sum	\$ _____
Payment to Date	\$ _____
Liquidated Damages	\$ _____
Payment Due Contractor	\$ _____

- 4. Subject to the provisions hereof, County shall forthwith pay to Contractor the undisputed sum of \$ _____ (_____ Dollars and _____ Cents) under the Contract, less any amounts represented by any notice to withhold funds on file with County as of the date of such payment.
- 5. Contractor acknowledges and hereby agrees that there are no unresolved or outstanding claims in dispute against County arising from the performance of work under the Contract, except for the claims described in Paragraph 6 and continuing obligations described in Paragraph 8. It is the intention of the parties in executing this Agreement and Release that this Agreement and Release shall be effective as a full, final and general release of all claims, demands, actions, causes of action, obligations, costs, expenses, damages, losses and liabilities of Contractor against County, all its respective agents, employees, inspectors, assignees and transferees except for the Disputed Claim is set forth in Paragraph 6 and continuing obligations described in Paragraph 8 hereof.

6. The following claims are disputed (hereinafter, the "Disputed Claims") and are specifically excluded from the operation of this Agreement and Release:

Claim No. Description of Claim Amount of Claim Date Claim Submitted

[Insert information, including attachment if necessary]

7. Consistent with California Public Contract Code section 7100, Contractor hereby agrees that, in consideration of the payment set forth in Paragraph 4 hereof, Contractor hereby releases and forever discharges County, all its agents, employees, inspectors, assignees, and transferees from any and all liability, claims, demands, actions, or causes of action of whatever kind or nature arising out of or in any way concerned with the Work under the Contract.
8. Guarantees and warranties for the Work, and any other continuing obligation of Contractor, shall remain in full force and effect as specified in the Contract Documents.
9. To the furthest extent permitted by California law, Contractor shall defend, indemnify, and hold harmless the County, its agents, representatives, officers, consultants, employees, trustees, and volunteers (the "indemnified parties") from any and all losses, liabilities, claims, suits, and actions of any kind, nature, and description, including, but not limited to, attorneys' fees and costs, directly or indirectly arising out of, connected with, or resulting from the performance of the Contract unless caused wholly by the sole negligence or willful misconduct of the indemnified parties.
10. Contractor hereby waives the provisions of California Civil Code § 1542 which provides as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

11. The provisions of this Agreement and Release are contractual in nature and not mere recitals and shall be considered independent and severable. If any such provision or any part thereof shall be at any time held invalid in whole or in part under any federal, state, county, municipal, or other law, ruling, or regulations, then such provision, or part thereof, shall remain in force and effect to the extent permitted by law, and the remaining provisions of this Agreement and Release shall also remain in full force and effect, and shall be enforceable.
12. All rights of County shall survive completion of the Work or termination of Contract, and execution of this Release.

* * * CAUTION: THIS IS A RELEASE - READ BEFORE EXECUTING * * *

COUNTY OF ALAMEDA

TITLE: _____

NAME: _____

SIGNATURE: _____

CONTRACTOR

TITLE: _____

NAME: _____

SIGNATURE: _____

END OF DOCUMENT

WARRANTY FORM

_____ ("Contractor") hereby agrees that the _____ ("Work" of Contractor) which Contractor has installed for County of Alameda ("County") for the following project:

PROJECT: **Juvenile Justice Center (JJC) Exterior Exercise Equipment** ("Project" or "Contract")

has been performed in accordance with the requirements of the Contract Documents and that the Work as installed will fulfill the requirements of the Contract Documents.

The undersigned agrees to repair or replace any or all of such Work that may prove to be defective in workmanship or material together with any other adjacent Work that may be displaced in connection with such replacement within a period of two (2) years from the date of completion as defined in Public Contract Code section 7107, subdivision (c), ordinary wear and tear and unusual abuse or neglect excepted. The date of completion is _____, 20__.

In the event of the undersigned's failure to comply with the above-mentioned conditions within a reasonable period of time, as determined by County, but not later than seven (7) days after being notified in writing by County, the undersigned authorizes the County to proceed to have said defects repaired and made good at the expense of the undersigned. The undersigned shall pay the costs and charges therefor upon demand.

Date: _____

Proper Name of Contractor: _____

Signature: _____

Print Name: _____

Title: _____

Representatives to be contacted for service subject to terms of Contract:

NAME: _____

ADDRESS: _____

PHONE NO.: _____

END OF DOCUMENT

SECTION 00 72 13

GENERAL CONDITIONS

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GENERAL CONDITIONS

1. CONTRACT TERMS AND DEFINITIONS

1.1 Definitions

Wherever used in the Contract Documents, the following terms shall have the meanings indicated, which shall be applicable to both the singular and plural thereof:

1.1.1 Adverse Weather: Shall be only weather that satisfies all of the following conditions: (1) unusually severe precipitation, sleet, snow, hail, heat, or cold conditions in excess of the norm for the location and time of year it occurred, (2) unanticipated, and (3) at the Project.

1.1.2 Approval, Approved, and/or Accepted: Refer to written authorization, unless stated otherwise.

1.1.3 Architect: The individual, partnership, corporation, joint venture, or any combination thereof, named as Architect, who will have the rights and authority assigned to the Architect in the Contract Documents. The term Architect means the County's Architect on this Project or the Architect's authorized representative.

1.1.4 Architect's Supplemental Instruction: A document prepared by the Architect to provide supplemental instructions or interpretations or to order minor changes in the work not involving an adjustment in the Contract Amount or Contract Time.

1.1.5 Bidder: A contractor who intends to provide a bid to the County to perform the Work of this Contract.

1.1.6 Change Order: A written order to the Contractor authorizing an addition to, deletion from, or revision in the Work, and/or authorizing an adjustment in the Contract Price or Contract Time.

1.1.7 Construction Change Directive: A written order prepared and issued by the County, the Construction Manager, and/or the Architect and signed by the County and the Architect, directing a change in the Work.

1.1.8 Construction Manager: The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the County. If no Construction Manager is used on the Project that is the subject of this contract, then all references to Construction Manager herein shall be read to refer to County.

1.1.9 Construction Schedule: The progress schedule of construction of the Project as provided by Contractor and approved by County.

1.1.10 Contract, Contract Documents: The Contract consists exclusively of the documents evidencing the agreement of the County and Contractor, identified as the Contract Documents. Purchase Orders issued as part of the County's ministerial account processes are not Contract Documents. The Contract Documents consist of the following documents:

- 1.1.10.1** Document 00 11 16 (Notice to Bidders)
- 1.1.10.2** Document 00 21 13 (Instructions to Bidders)
- 1.1.10.3** Document 00 22 19 (Supplemental Instructions to Bidders)
- 1.1.10.4** Document 00 31 19 (Existing Conditions Information)
- 1.1.10.5** Document 00 41 13 (Bid Form)
- 1.1.10.6** Document 00 43 13 (Bid Security Form)
- 1.1.10.7** Document 00 43 46 (Designated Subcontractors List)
- 1.1.10.8** Document 00 45 01 (Site-Visit Certification), if a site visit was required.
- 1.1.10.9** Document 00 45 13 (Non-Collusion Declaration)
- 1.1.10.10** Document 00 45 26 (Workers' Compensation Certification)
- 1.1.10.11** Document 00 45 46.01 (Prevailing Wage and Related Labor Requirements Certification)
- 1.1.10.12** Document 00 45 46.04 (Hazardous Materials Certification)
- 1.1.10.13** Document 00 51 10 (Notice of Award)
- 1.1.10.14** Document 00 52 13 (Agreement)
- 1.1.10.15** Document 00 55 00 (Notice to Proceed)
- 1.1.10.16** Document 00 61 30 (Escrow of Bid Documentation)
- 1.1.10.17** Document 00 61 40 (Escrow Agreement for Security Deposits in Lieu of Retention)
- 1.1.10.18** Document 00 61 13.13 (Performance Bond)
- 1.1.10.19** Document 00 61 13.16 (Payment Bond)
- 1.1.10.20** Document 00 65 19.26 (Final Settlement Certificate)
- 1.1.10.21** Document 00 65 36 (Warranty)
- 1.1.10.22** Document 00 72 13 General Conditions
- 1.1.10.23** Document 00 73 13 Special Conditions
- 1.1.10.24** Document 00 73 56 (Hazardous Materials Procedures and Requirements)
- 1.1.10.25** Divisions 01 through 49
- 1.1.10.26** All Plans, Technical Specifications, and Drawings

1.1.10.27 Any and all addenda to any of the above documents

1.1.10.28 Any and all change orders or written modifications to the above documents if approved in writing by the County.

1.1.11 Contract Price: The total monies payable to the Contractor under the terms and conditions of the Contract Documents.

1.1.12 Contract Time: The time period stated in the Agreement for the completion of the Work.

1.1.13 Contractor: The person or persons identified in the Agreement as contracting to perform the Work to be done under this Contract, or the legal representative of such a person or persons.

1.1.14 County: County of Alameda, acting through its Board of Supervisors or any of its authorized agents. The County may, at any time:

1.1.14.1 Direct the Contractor to communicate with or provide notice to the Construction Manager or the Architect on matters for which the Contract Documents indicate the Contractor will communicate with or provide notice to the County; and/or

1.1.14.2 Direct the Construction Manager or the Architect to communicate with or direct the Contractor on matters for which the Contract Documents indicate the County will communicate with or direct the Contractor.

1.1.15 Daily Job Report(s): Daily Project reports prepared by the Contractor's employee(s) who are present on Site, which shall include the information required herein.

1.1.16 Day(s): Unless otherwise designated, day(s) means calendar day(s).

1.1.17 Drawings: (or "Plans") The graphic and pictorial portions of the Contract Documents showing the design, location, scope and dimensions of the work, generally including plans, elevations, sections, details, schedules, sequence of operation, and diagrams.

1.1.18 Force Account Directive: A process that may be used when the County and the Contractor cannot agree on a price for a specific portion of work or before the Contractor prepares prices for a specific portion of work and whereby the Contractor performs the work as indicated herein on a time and materials basis.

1.1.19 Premises: The real property owned by the County on which the Site is located.

1.1.20 Product(s): New material, machinery, components, equipment, fixtures, and systems forming the Work, including existing materials or components required and approved by the County for reuse.

1.1.21 Product Data: Illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work.

1.1.22 Project: The planned undertaking as provided for in the Contract Documents.

1.1.23 Program Manager: The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the County. If no Program Manager is designated for Project that is the subject of this Contract, then all references to Project Manager herein shall be read to refer to County.

1.1.24 Provide: Shall include “provide complete in place,” that is, “furnish and install,” and “provide complete and functioning as intended in place” unless specifically stated otherwise.

1.1.25 Request for Information: A written request prepared by the Contractor requesting that the Architect provide additional information necessary to clarify or amplify an item in the Contract Documents that the Contractor believes is not clearly shown or called for in the Drawings or Specifications or other portions of the Contract Documents, or to address problems that have arisen under field conditions.

1.1.26 Request for Substitution: A request by Contractor to substitute an equal or superior material, product, thing, or service for a specific material, product, thing, or service that has been designated in the Contract Documents by a specific brand or trade name.

1.1.27 Safety Orders: Written and/or verbal orders for construction issued by the California Division of Industrial Safety (“CalOSHA”) or by the United States Occupational Safety and Health Administration (“OSHA”).

1.1.28 Safety Plan: Contractor’s safety plan specifically adapted for the Project. Contractor's Safety Plan shall comply with all provisions regarding Project safety, including all applicable provisions in these General Conditions.

1.1.29 Samples: Physical examples that illustrate materials, products, equipment, finishes, colors, or workmanship and that, when approved in accordance with the Contract Documents, establish standards by which portions of the Work will be judged.

1.1.30 Shop Drawings: All drawings, prints, diagrams, illustrations, brochures, schedules, and other data that are prepared by the Contractor, a subcontractor, manufacturer, supplier, or distributor, that illustrate how specific portions of the Work shall be fabricated or installed.

1.1.31 Site: The Project site as shown on the Drawings.

1.1.32 Specifications: That portion of the Contract Documents, Division 01 through Division 49, and all technical sections, and addenda to all of these, if any, consisting of written descriptions and requirements of a technical nature of materials, equipment, construction methods and systems, standards, and workmanship.

1.1.33 Subcontractor: A contractor and/or supplier who is under contract with the Contractor or with any other subcontractor, regardless of tier, to perform a portion of the Work of the Project.

1.1.34 Submittal Schedule: The schedule of submittals as provided by Contractor and approved by County.

1.1.35 Surety: The person, firm, or corporation that executes as surety the Contractor’s Performance Bond and Payment Bond, and must be a California admitted surety insurer as defined in the Code of Civil Procedure § 995.120.

1.1.36 Work: All labor, materials, equipment, components, appliances, supervision, coordination, and services required by, or reasonably inferred from, the Contract Documents, that are necessary for the construction and completion of the Project.

1.2 Laws Concerning The Contract

Contract is subject to all provisions of the Constitution and laws of California governing, controlling, or affecting County, or the property, funds, operations, or powers of County, and such provisions are by this reference made a part hereof. Any provision required by law to be included in this Contract shall be deemed to be inserted.

1.3 No Oral Agreements

No oral agreement or conversation with any officer, agent, or employee of County, either before or after execution of Contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the Contract.

1.4 No Assignment

Contractor shall not assign this Contract or any part thereof including, without limitation, any services or money to become due hereunder without the prior written consent of the County. Assignment without County's prior written consent shall be null and void. Any assignment of money due or to become due under this Contract shall be subject to a prior lien for services rendered or material supplied for performance of work called for under this Contract in favor of all persons, firms, or corporations rendering services or supplying material to the extent that claims are filed pursuant to the Civil Code, Code of Civil Procedure, Government Code, Labor Code, and/or Public Contract Code, and shall also be subject to deductions for liquidated damages or withholding of payments as determined by County in accordance with this Contract. Contractor shall not assign or transfer in any manner to a Subcontractor or supplier the right to prosecute or maintain an action against the County.

1.5 Notice And Service Thereof

1.5.1 Any notice from one party to the other or otherwise under Contract shall be in writing and shall be dated and signed by the party giving notice or by a duly authorized representative of that party. Any notice shall not be effective for any purpose whatsoever unless served in one of the following manners:

- 1.5.1.1** If notice is given by personal delivery thereof, it shall be considered delivered on the day of delivery.
- 1.5.1.2** If notice is given by overnight delivery service, it shall be considered delivered on (1) day after date deposited, as indicated by the delivery service.
- 1.5.1.3** If notice is given by depositing same in United States mail, enclosed in a sealed envelope, it shall be considered delivered three (3) days after date deposited, as indicated by the postmarked date.
- 1.5.1.4** If notice is given by registered or certified mail with postage prepaid, return receipt requested, it shall be considered delivered on the day the notice is signed for.

1.6 No Waiver

The failure of County in any one or more instances to insist upon strict performance of any of the terms of this Contract or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion. No action or failure to act by the County, Architect, or Construction Manager shall constitute a waiver of any right or duty afforded the County under the Contract, nor shall any action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

1.7 Substitutions For Specified Items

Substitutions for specified items shall be governed by the Special Conditions (Document 00 73 13).

1.8 Materials and Work

1.8.1 Except as otherwise specifically stated in this Contract, Contractor shall provide and pay for all materials, labor, tools, equipment, transportation, supervision, temporary constructions of every nature, and all other services, management, and facilities of every nature whatsoever necessary to execute and complete this Contract within the Contract Time.

1.8.2 Unless otherwise specified, all materials shall be new, and the best of their respective kinds and grades as noted or specified and workmanship shall be of good quality.

1.8.3 Materials shall be furnished in ample quantities and at such times as to ensure uninterrupted progress of Work and shall be stored properly and protected as required.

1.8.4 For all materials and equipment specified or indicated in the Drawings, the Contractor shall provide all labor, materials, equipment, and services necessary for complete assemblies and complete working systems, functioning as intended. Incidental items not indicated on Drawings, nor mentioned in the Specifications, that can legitimately and reasonably be inferred to belong to the Work described, or be necessary in good practice to provide a complete assembly or system, shall be furnished as though itemized here in every detail. In all instances, material and equipment shall be installed in strict accordance with each manufacturer's most recent published recommendations and specifications.

1.8.5 Contractor shall, after award of Contract by County and after relevant submittals have been approved, place orders for materials and/or equipment as specified so that delivery of same may be made without delays to the Work. Contractor shall, upon demand from County, present documentary evidence showing that orders have been placed.

1.8.6 County reserves the right but has no obligation, for any neglect in complying with the above instructions, to place orders for such materials and/or equipment as it may deem advisable in order that the Work may be completed at the date specified in the Agreement, and all expenses incidental to the procuring of said materials and/or

equipment shall be paid for by Contractor or withheld from payment(s) to Contractor.

1.8.7 Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver the Site to County, together with all improvements and appurtenances constructed or placed thereon by it, and free from any claims, liens, or charges. Contractor further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any work covered by the Contract shall have any right to lien any portion of the Premises or any improvement or appurtenance thereon, except that Contractor may install metering devices or other equipment of utility companies or of political subdivision, title to which is commonly retained by utility company or political subdivision. In the event of installation of any such metering device or equipment, Contractor shall advise County as to owner thereof.

1.8.8 Nothing contained in this Article, however, shall defeat or impair the rights of persons furnishing materials or labor under any bond given by Contractor for their protection or any rights under any law permitting such protection or any rights under any law permitting such persons to look to funds due Contractor in hands of County (for example Stop Notices), and this provision shall be inserted in all subcontracts and material contracts and notice of its provisions shall be given to all persons furnishing material for work when no formal contract is entered into for such material.

1.8.9 Title to new materials and/or equipment for the Work of this Contract and attendant liability for its protection and safety shall remain with Contractor until incorporated in the Work of this Contract and accepted by County. No part of any materials and/or equipment shall be removed from its place of storage except for immediate installation in the Work of this Contract. Contractor shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to County or its authorized representative and shall, at the County's request, forward it to the County.

2. COUNTY

2.1 Occupancy

County reserves the right to occupy portions of the Project at any time before Final Completion. Neither the County's Final Acceptance, the making of Final Payment, any provision in Contract Documents, nor the use or occupancy of the Work, in whole or in part, by County shall constitute acceptance of Work not in accordance with the Contract Documents nor relieve the Contractor or the Contractor's Performance Bond Surety from liability with respect to any warranties or responsibility for faulty or defective Work or materials, equipment and workmanship incorporated therein.

3. ARCHITECT

3.1 Role and Authority

The Architect shall represent County during the Project and will observe the progress and quality of the Work on behalf of County. Architect shall have the authority to act on behalf of County to the extent expressly provided in the Contract Documents and to the extent determined by County. Architect shall have authority to reject materials, workmanship, and/or the Work whenever rejection may be necessary, in Architect's reasonable opinion, to ensure the proper execution of the Contract.

3.2 Interpretations

Architect shall, with County and on behalf of County, determine the amount, quality, acceptability, and fitness of all parts of the Work, and interpret the Specifications, Drawings, and shall, with County, interpret all other Contract Documents.

3.3 Laws

Architect shall have all authority and responsibility established by law, including Title 24 of the California Code of Regulations.

3.4 Communications

Contractor shall provide County and the Construction Manager with a copy of all written communication between Contractor and Architect at the same time as that communication is made to Architect, including, without limitation, all RFIs, correspondence, submittals, claims, and proposed change orders.

4. CONSTRUCTION MANAGER

4.1 Role and Authority

If a construction manager is used on this Project (“Construction Manager” or “CM”), the Construction Manager will provide administration of the Contract on the County’s behalf. After execution of the Contract and Notice to Proceed, all correspondence, and/or instructions from Contractor and/or County shall be forwarded through the Construction Manager. The Construction Manager will not be responsible for and will not have control or charge of construction means, methods, techniques, sequences, or procedures or for safety precautions in connection with the Work, which shall all remain the Contractor’s responsibility.

4.2 Authority to Reject

The Construction Manager, however, will have authority to reject materials and/or workmanship not conforming to the Contract Documents, as determined by the County and/or the Architect. The Construction Manager shall also have the authority to require special inspection or testing of any portion of the Work, whether it has been fabricated, installed or fully completed. Any decision made by the Construction Manager, in good faith, shall not give rise to any duty or responsibility of the Construction Manager to the Contractor, any Subcontractor, their agents, employees, or other persons performing any of the Work. The Construction Manager shall have free access to any or all parts of the Work at any time.

4.3 If No Construction Manager

If the County does not use a Construction Manager on this Project, all references to Construction Manager or CM shall be read as County.

5. INSPECTIONS AND TESTS

5.1 Tests and Inspections

5.1.1 The County will select an independent testing laboratory to conduct tests. Selection of the materials required to be tested shall be by the laboratory or the County's representative and not by the Contractor. The Contractor shall notify the County's representative a sufficient time in advance of its readiness for required observation or inspection.

5.1.2 The Contractor shall notify the County's representative a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents that must by terms of the Contract Documents be tested, in order that the County may arrange for the testing of same at the source of supply. This notice shall be, at a minimum, seventy-two (72) hours prior to the manufacture of the material that needs to be tested.

5.1.3 Any material shipped by the Contractor from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said representative that such testing and inspection will not be required, shall not be incorporated into and/or onto the Project.

5.1.4 The County will select and pay testing laboratory costs for all tests and inspections. Costs of tests of any materials found to be not in compliance with the Contract Documents shall be paid for by the County and reimbursed by the Contractor or deducted from the Contract Price.

5.2 Costs for After Hours and/or Off-Site Inspections

If the Contractor performs Work outside the County's regular working hours or requests the County to perform inspections off Site, costs of any inspections required outside regular working hours or off Site shall be borne by the Contractor and may be invoiced to the Contractor by the County or the County may deduct those expenses from the next Progress Payment.

6. CONTRACTOR

Contractor shall construct the Work for the Contract price including any adjustment(s) to the Contract Price pursuant to provisions herein regarding changes to the Contract Price. Except as otherwise noted, Contractor shall provide and pay for all labor, materials, equipment, permits, fees, licenses, facilities, transportation, taxes, and services necessary for the proper execution and completion of the Work, except as indicated herein.

6.1 Status of Contractor

6.1.1 Contractor is and shall at all times be deemed to be an independent contractor and shall be wholly responsible for the manner in which it and its Subcontractors perform the services required of it by the Contract Documents. Nothing herein contained shall be construed as creating the relationship of employer and employee, or principal and agent, between the County, or any of the County's employees or agents, and Contractor or any of Contractor's Subcontractors, agents or employees. Contractor assumes exclusively the responsibility for the acts of its employees as they relate to the services to be provided during the course and scope of their employment. Contractor, its agents, its employees and its Subcontractors shall not be entitled to any rights or privileges

of County employees. County shall be permitted to monitor the Contractor's activities to determine compliance with the terms of this Contract.

6.1.2 As required by law, Contractor and all Subcontractors shall be properly licensed and regulated by the Contractor's State License Board, 9821 Business Park Drive, Post Office Box 2600, Sacramento, California 95826, <http://www.cslb.ca.gov>.

6.2 Contractor's Supervision

6.2.1 At all times during progress of the Work, while any work is being performed, Contractor shall keep on the Premises, and at all other locations where any Work related to the Contract is being performed, a competent project manager and construction superintendent who are employees of the Contractor, to whom the County does not object and at least one of whom shall be fluent in English, written and verbal.

6.2.2 The project manager and construction superintendent shall both speak fluently the predominant language of the Contractor's employees. All workers shall be sufficiently competent in English to respond to inquiries and instructions and give directions concerning matters of safety and concerning the identification and location of site foremen, the Contractor's construction superintendent, and the Contractor's project manager.

6.2.3 Before commencing the Work herein, Contractor shall give written notice to County of the name and relevant credentials of its project manager and construction superintendent. Neither the Contractor's project manager nor construction superintendent shall be changed except with prior written notice to County and County's approval, unless the Contractor's project manager and/or construction superintendent proves to be unsatisfactory to Contractor, County, any of the County's employees, agents, the Construction Manager, or the Architect, in which case, Contractor shall notify County in writing. The Contractor's project manager and construction superintendent shall each represent Contractor, and all directions given to Contractor's project manager and/or construction superintendent shall be as binding as if given to Contractor.

6.2.4 Contractor shall give efficient supervision to Work, using its best skill and attention. Contractor shall carefully study and compare all Contract Documents, Drawings, Specifications, and other instructions and shall at once report to County, Construction Manager, and Architect any error, inconsistency, or omission that Contractor or its employees and Subcontractors may discover, in writing. The Contractor shall have responsibility for discovery of errors, inconsistencies, or omissions.

6.3 Duty to Provide Fit Workers

6.3.1 Contractor and Subcontractor(s) shall at all times enforce strict discipline and good order among their employees and shall not employ or work any unfit person or anyone not skilled in work assigned to that person. It shall be the responsibility of Contractor to ensure compliance with this requirement. County may require Contractor to permanently remove unfit persons from Project Site.

6.3.2 Any person in the employ of Contractor or Subcontractor(s) whom County may deem incompetent or unfit shall be excluded from working on the Project and shall not again be employed on the Project except with the prior written consent of County.

6.3.3 The Contractor shall furnish labor that can work in harmony with all

other elements of labor employed or to be employed in the Work.

6.3.4 If Contractor intends to make any change in the name or legal nature of the Contractor's entity, Contractor must first notify the County. The County shall determine if Contractor's intended change is permissible while performing this Contract.

6.4 Purchase of Materials and Equipment

The Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from County to assure that there will be no delays.

6.5 Documents On Work Site

6.5.1 Contractor shall at all times keep on the Work Site, or such other location as County may authorize in writing one legible copy of all Contract Documents, including Addenda and Change Orders, and titles 19 and 24 of the California Code of Regulations, the specified edition(s) of the Uniform Building Code, all approved Drawings, Plans, Schedules, and Specifications, and all codes and documents referred to in the Specifications, and made part thereof. These documents shall be kept in good order and available to County, Construction Manager, Architect, Architect's representatives, and all authorities having jurisdiction. Contractor shall be acquainted with and comply with the provisions of these titles as they relate to this Project. Contractor shall also be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project. Contractor shall coordinate with Architect and Construction Manager.

6.5.2 Daily Job Reports. Contractor shall maintain, at a minimum, at least one (1) set of Daily Job Reports on the Project. These must be prepared by the Contractor's employee(s) who are present on Site and must include, at a minimum, the following information:

- 6.5.2.1** A brief description of all Work performed on that day. This shall include a listing of what was done, which contractors were on site that day, and where on the site the work was performed.
- 6.5.2.2** A summary of all other pertinent events and/or occurrences on that day.
- 6.5.2.3** The weather conditions on that day.
- 6.5.2.4** A list of all Subcontractor(s) working on that day,
- 6.5.2.5** A list of each Contractor employee working on that day and the total hours worked for each employee.
- 6.5.2.6** A complete list of all equipment on Site that day, whether in use or not.
- 6.5.2.7** All complete list of all materials, supplies, and equipment delivered on that day.
- 6.5.2.8** A complete list of all inspections and tests performed on that day.
- 6.5.2.9** Each day Contractor shall provide a copy of the previous day's Daily Job Report to the County or the County's Construction Manager.

6.6 Preservation of Records

The County shall have the right to examine and audit all Daily Job Reports or other Project records of Contractor's project manager(s), project superintendent(s), and/or project foreperson(s), all certified payroll records and/or related documents including, without limitation, payroll, payment, timekeeping and tracking documents; all books, estimates, records, contracts, documents, bid documents, bid cost data, subcontract job cost reports, and other data of the Contractor, any Subcontractor, and/or supplier, including computations and projections related to bidding, negotiating, pricing, or performing the Work or Contract modification, in order to evaluate the accuracy, completeness, and currency of the cost, manpower, coordination, supervision, or pricing data at no additional cost to the County. These documents may be duplicative and/or be in addition to any Bid Documents held in escrow by the County. The Contractor shall make available at its office at all reasonable times the materials described in this paragraph for the examination, audit or reproduction until three (3) years after final payment under this Contract. Notwithstanding the provisions above, Contractor shall provide any records requested by any governmental agency if available, after the time set forth above.

6.7 Integration of Work

6.7.1 Contractor shall do all cutting, fitting, patching, and preparation of Work as required to make its several parts come together properly, to fit it to receive or be received by work of other contractors, and to coordinate tolerances to various pieces of work, showing upon, or reasonably implied by, the Drawings and Specifications for the completed structure, and shall conform them as County and/or Architect may direct.

6.7.2 All cost caused by defective or ill-timed Work shall be borne by Contractor, inclusive of repair work.

6.7.3 Contractor shall not endanger any work performed by it or anyone else by cutting, excavating, or otherwise altering work and shall not cut or alter work of any other contractor except with the consent of County.

6.8 Obtaining of Permits and Licenses

6.8.1 Contractor shall secure and pay for all permits, licenses, and certificates necessary for prosecution of Work before the date of the commencement of the Work or before the permits, licenses, and certificates are legally required to continue the Work without interruption. The Contractor shall obtain and pay, only when legally required, for all licenses, permits, inspections, and inspection certificates required to be obtained from or issued by any authority having jurisdiction over any part of the Work included in the Contract. All final permits, licenses, and certificates shall be delivered to County before demand is made for final payment.

6.9 Work to Comply With Applicable Laws and Regulations

6.9.1 Contractor shall give all notices and comply with the following specific laws, ordinances, rules, and regulations and all other applicable laws, ordinances, rules, and regulations bearing on conduct of Work as indicated and specified, including but not limited to the appropriate statutes and administrative code sections. If Contractor

observes that Drawings and Specifications are at variance therewith, or should Contractor become aware of the development of conditions not covered by Contract Documents that will result in finished Work being at variance therewith, Contractor shall promptly notify County in writing, including by e-mail, and any changes deemed necessary by County shall be made as provided in Contract for changes in Work.

- 6.9.1.1** National Electrical Safety Code, U. S. Department of Commerce
- 6.9.1.2** National Board of Fire Underwriters' Regulations
- 6.9.1.3** Uniform Building Code, latest addition, and the California Code of Regulations, title 24, including amendments
- 6.9.1.4** Manual of Accident Prevention in Construction, latest edition, published by A.G.C. of America
- 6.9.1.5** Industrial Accident Commission's Safety Orders, State of California
- 6.9.1.6** Regulations of the State Fire Marshall (title 19, California Code of Regulations) and Pertinent Local Fire Safety Codes
- 6.9.1.7** Americans with Disabilities Act
- 6.9.1.8** Government Code of the State of California
- 6.9.1.9** Labor Code of the State of California, Division 2, part 7, Public Works and Public Agencies
- 6.9.1.10** Public Contract Code of the State of California
- 6.9.1.11** California Art Preservation Act
- 6.9.1.12** U. S. Copyright Act
- 6.9.1.13** U. S. Visual Artists Rights Act

6.9.2 Contractor shall comply with all applicable mitigation measures, if any, adopted by any public agency with respect to this Project pursuant to the California Environmental Quality Act (Public Resources Code § 21000 et. Seq.)

6.9.3 If Contractor performs any Work that it knew, or through exercise of reasonable care should have known, to be contrary to any applicable laws, ordinance, rules, or regulations, Contractor shall bear all costs arising therefrom.

6.9.4 Where Specifications or Drawings state that materials, processes, or procedures must be approved by the State Fire Marshall, or other body or agency, Contractor shall be responsible for satisfying requirements of such bodies or agencies.

6.10 Safety/Protection of Persons and Property

6.10.1 The Contractor will be solely and completely responsible for conditions of the Work Site, including safety of all persons and property during performance of the Work. This requirement will apply continuously and not be limited to normal working hours. The wearing of hard hats and other personal protection equipment ("PPE") shall be mandatory at all times for all personnel on Site. Contractor shall supply sufficient hard hats and PPE to properly equip all employees and visitors.

6.10.2 Any construction review of the Contractor's performance is not

intended to include a review of the adequacy of the Contractor's safety measures in, on, or near the Work Site.

6.10.3 Implementation and maintenance of safety programs shall be the sole responsibility of the Contractor.

6.10.4 The Contractor shall furnish to the County a copy of the Contractor's safety plan within the time frame indicated in the Contract Documents and specifically adapted for the Project.

6.10.5 Contractor shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of this Contract and shall take all necessary measures and be responsible for the proper care and completion and final acceptance by County. All Work shall be solely at Contractor's risk with the exception of damage to the Work caused by "acts of God" as defined in Public Contract Code § 7105.

6.10.6 Contractor shall take, and require Subcontractors to take, all necessary precautions for safety of workers on the Project and shall comply with all applicable federal, state, local, and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to premises where Work is being performed and to provide a safe and healthful place of employment. Contractor shall furnish, erect, and properly maintain at all times, all necessary safety devices, safeguards, construction canopies, signs, nets, barriers, lights, and watchmen for protection of workers and the public and shall post danger signs warning against hazards created by such features in the course of construction.

6.10.7 Hazards Control – Contractor shall store volatile wastes in covered metal containers and remove them from the Site daily. Contractor shall prevent the accumulation of wastes that create hazardous conditions. Contractor shall provide adequate ventilation during use of volatile or noxious substances.

6.10.8 Contractor shall designate a responsible member of its organization on the Project, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety, and health of workers. Name and position of person so designated shall be reported to County by Contractor.

6.10.9 Contractor shall correct any violations of safety laws, rules, orders, standards, or regulations. Upon the issuance of a citation or notice of violation by the Division of Occupational Safety and Health, Contractor shall correct such violation promptly.

6.10.10 Contractor shall comply with any County stormwater requirements that are approved by the County and applicable to the Project, at no additional cost to the County.

6.10.11 In an emergency affecting safety of life or of work or of adjoining property, Contractor, without special instruction or authorization, shall act, at its discretion, to prevent such threatened loss or injury. Any compensation claimed by Contractor on account of emergency work shall be determined by agreement.

6.10.12 All connections to public utilities and/or existing on-site services shall be made and maintained in such a manner as to not interfere with the continuing use of same by the County during the entire progress of the Work.

6.10.13 Contractor shall provide such heat, covering, and enclosures as are necessary to protect all Work, materials, equipment, appliances, and tools against damage by weather conditions, such as extreme heat, cold, rain, snow, dry winds, flooding, or dampness.

6.10.14 The Contractor shall protect and preserve the Work from all damage or accident, providing any temporary roofs, window and door coverings, boxing, or other construction. The Contractor shall be responsible for existing structures, walks, roads, trees, landscaping, and/or improvements in working areas; and shall provide adequate protection therefor. If temporary removal is necessary of any of the above items, or damage occurs due to the Work, the Contractor shall replace same at his expense with same kind, quality, and size of Work or item damaged. This shall include any adjoining property of the County and others.

6.10.15 Contractor shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property, and structures (including, without limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations.

6.10.16 Contractor shall confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits, or directions of Architect, and shall not interfere with the Work or unreasonably encumber Premises or overload any structure with materials. Contractor shall enforce all instructions of County and Architect regarding signs, advertising, fires, and smoking, and require that all workers comply with all regulations while on Project Site.

6.10.17 Contractor, Contractor's employees, Subcontractors, Subcontractors' employees, or any person associated with the Work shall conduct themselves in a manner appropriate for a public site. No verbal or physical contact with the public, neighbors, or tenants, or profanity, or inappropriate attire or behavior will be permitted. County may require Contractor to permanently remove non-complying persons from Project Site.

6.10.18 Contractor shall take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed, Contractor shall have a civil engineer, registered as a professional engineer in California, replace them at no cost to County.

6.10.19 In the event that the Contractor enters into any agreement with owners of any adjacent property to enter upon the adjacent property for the purpose of performing the Work, Contractor shall fully indemnify, defend, and hold harmless each person, entity, firm, or agency that owns or has any interest in adjacent property. The form and content of the agreement of indemnification shall be approved by the County prior to the commencement of any Work on or about the adjacent property. The Contractor shall also indemnify the County as provided in the indemnification provision herein. These provisions shall be in addition to any other requirements of the owners of the adjacent property.

6.11 Working Evenings and Weekends

Contractor may be required to work evenings and/or weekends at no additional cost to the County. Contractor shall give the County seventy-two (72) hours' notice prior to performing any evening and/or weekend work. Contractor shall perform all evening and/or weekend work only upon County's approval and in compliance with all applicable rules, regulations, laws, and local ordinances including, without limitation, all noise and light limitations. Contractor shall reimburse the County for any expenses necessitated by the Contractor's evening and/or weekend work.

6.12 Badge Policy For Contractors

All Contractors doing work on the Project will provide their workers with identification badges. These badges will be worn by all members of the Contractor's staff who are working in a County facility.

6.12.1 Badges must be filled out in full and contain the following information:

- 6.12.1.1** Name of Contractor and Contractor's Company logo, if any
- 6.12.1.2** Name and front facial photograph of Employee
- 6.12.1.3** Contractor's address and phone number
- 6.12.1.4** Name and phone number of Project Manager (County)

6.12.2 Badges are to be worn when the Contractor or Contractor's employees are on site and must be visible at all times. Contractors must inform their employees that they are required to allow County employees to review the information on the badges upon request

6.12.3 Contractor or subcontractor staff or employees who fail to display identification badges as required will not be allowed to access the job site and shall not be considered an acceptable project delay or an allowable cost impact to the Project.

6.13 County Drug Policy - Drug-Free Workplace

6.13.1 Contractor, Contractor's employees, and Contractor's Subcontractors and their employees shall comply with the County's policy of maintaining a drug-free workplace. Neither Contractor/Subcontractor nor Contractor's/Subcontractor's employees shall unlawfully manufacture, distribute, dispense, possess or use controlled substances, as defined in 21 U.S. Code § 812, including marijuana, heroin, cocaine, and amphetamines, at any County facility or work site. If Contractor or any employee of contractor is convicted or pleads nolo contendere to a criminal drug statute violation occurring at a County facility or work site, the Contractor within five (5) calendar days thereafter shall notify the Project Manager with the name of the employee, date and statutory conviction, and name of the Court in which the conviction was entered. Violation of this provision shall constitute a material breach of this contract.

6.14 Cleaning Up

6.14.1 The Contractor shall provide all services, labor, materials, and equipment necessary for protecting the Work, all Project occupants, furnishings, equipment, and building structure from damage until its completion and final acceptance

by County. Dust barriers shall be provided to isolate dust and dirt from construction operations. At completion of the Work and portions thereof, Contractor shall clean to the original state any areas beyond the Work area that become dust laden as a result of the Work. The Contractor must erect the necessary warning signs and barricades to ensure the safety of all Project occupants. The Contractor at all times must maintain good housekeeping practices to reduce the risk of fire damage and must make a fire extinguisher, fire blanket, and/or fire watch, as applicable, available at each location where cutting, braising, soldering, and/or welding is being performed and locations where there is an increased risk of fire.

6.14.2 Contractor at all times shall keep Premises free from debris such as waste, rubbish, and excess materials and equipment caused by the Work. Contractor shall not leave debris under, in, or about the Premises, but shall promptly remove same from the Premises on a daily basis. If Contractor fails to clean up, County may do so, and the cost thereof shall be charged to Contractor. If Contract is for work on an existing facility, Contractor shall also perform specific clean-up on or about the Premises upon request by the County as it deems necessary for the continuing use of the facility. Contractor shall comply with all related provisions of the Specifications.

6.14.3 If the Construction Manager, Architect, or County observes the accumulation of trash and debris, the County will give the Contractor a 24-hour written notice to mitigate the condition.

6.14.4 Should the Contractor fail to perform the required clean-up, or should the clean-up be deemed unsatisfactory by the County, the County will then perform the clean-up. All cost associated with the clean-up work (including all travel, payroll burden, and costs for supervision) will be deducted from the Contract Price, or County may withhold those amounts from payment(s) to Contractor.

7. SUBCONTRACTORS

7.1 Contractor Shall Provide Subcontractor Information

Contractor shall provide the County with information for all Subcontracts as indicated in the Contractor's Submittals and Schedules Section herein.

7.2 No Contractual Relationship Between County and Subcontractors

No contractual relationship exists between the County and any Subcontractor, Supplier, or sub-subcontractor supplier, or sub-subcontractor by reason of this Contract.

7.3 Contractor Binds Every Subcontractor by Terms of Contract

Contractor agrees to bind every Subcontractor by terms of Contract as far as those terms are applicable to Subcontractor's work. If Contractor shall subcontract any part of this Contract, Contractor shall be as fully responsible to County for acts and omissions of any Subcontractor and of persons either directly or indirectly employed by any Subcontractor, as it is for acts and omissions of persons directly employed by Contractor. The divisions or sections of the Specifications are not intended to control the Contractor in dividing the Work among Subcontractors or limit the work performed by any trade.

7.4 No Waiver of Obligations

County's consent to, or approval of, or failure to object to, any Subcontractor under this Contract shall not in any way relieve Contractor of any obligations under this Contract, and no such consent shall be deemed to waive any provisions of this Contract.

7.5 Contractor to Familiarize Itself with Laws

Contractor is directed to familiarize itself with §§4100 through 4114 of the Public Contract Code of the State of California, as regards subletting and subcontracting, and to comply with all applicable requirements therein. In addition, Contractor is directed to familiarize itself with §§1720 through 1861 of the Labor Code of the State of California, as regards the payment of prevailing wages and related issues, and to comply with all applicable requirements therein all including, without limitation, § 1775 and the Contractor's and Subcontractors' obligations and liability for violations of prevailing wage law and other applicable laws.

7.6 Subcontractor Substitutions

No Contractor whose Bid is accepted shall, without consent of the County and in full compliance with § 4100, et seq, of the Public Contract Code, including, without limitation, §§4107, 4107.5, and 4109 of the Public Contract Code, either:

7.6.1 Substitute any person as a Subcontractor in place of the Subcontractor designated in the original Bid; or

7.6.2 Permit any Subcontract to be assigned or transferred, or allow any portion of the Work to be performed by anyone other than the original Subcontractor listed in the Bid; or

7.6.3 Sublet or subcontract any portion of the Work in excess of one-half of one percent (1/2 of 1%) of the Contractor's total bid as to which his original bid did not designate a Subcontractor.

7.7 Subcontractor Coordination

The Contractor shall be responsible for the coordination of the trades, Subcontractors, sub-subcontractors, and material or equipment suppliers working on the Project.

7.8 Subcontractor Relations

Contractor is solely responsible for settling any differences between the Contractor and its Subcontractor(s) or between Subcontractors.

7.9 Assignment or Termination

Contractor must include in all of its subcontracts the assignment provisions as indicated in the Termination section of these General Conditions.

8. OTHER CONTRACTS/CONTRACTORS

8.1 County Right to Perform

County reserves the right to let other contracts, and/or to perform work with its

own forces, in connection with the Project. Contractor shall afford other County and other contractors' reasonable opportunity for introduction and storage of their materials and execution of their work and shall properly coordinate and connect Contractor's Work with the work of County and other contractors.

8.2 Protection of Work

In addition to Contractor's obligation to protect its own Work, Contractor shall protect the work of County and any other contractor that Contractor encounters while working on the Project.

8.3 Coordination with Other Work

If any part of Contractor's Work depends for proper execution or results upon work of County or any other contractor, the Contractor shall inspect and promptly report to the County in writing, including by e-mail, before proceeding with its Work any defects in County's or any other contractor's work that render Contractor's Work unsuitable for proper execution and results. Contractor shall be held accountable for damages to County for County's or any other contractor's work that Contractor failed to inspect or should have inspected. Contractor's failure to inspect and report shall constitute Contractor's acceptance of all County's or other contractor's work as fit and proper for reception of Contractor's Work, except as to defects that may develop in County's or other contractor's work after execution of Contractor's Work.

8.4 Measurement of Work Performed

To ensure proper execution of its subsequent work, Contractor shall measure and inspect work already in place and shall at once report to the County in writing, including by e-mail, any discrepancy between that executed work and the Contract Documents.

8.5 Knowledge of Other Work

Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any County-performed work or other contracts that have been or may be awarded by County in prosecution of the Project to the end that Contractor may perform this Contract in light of the other contracts, if any.

8.6 No Exclusive Occupancy of Site

Nothing herein contained shall be interpreted as granting to Contractor exclusive occupancy of the Site, the Premises, or of the Project. Contractor shall not cause any unnecessary hindrance or delay to the use and/or operation(s) of the Premises and/or to County or any other contractor working on the Project. If simultaneous execution of any contract or operation is likely to cause interference with performance of Contractor's Contract, Contractor shall coordinate with those contractor(s), person(s), and/or entity(s) and shall notify the County of the resolution.

9. DRAWINGS AND SPECIFICATIONS

9.1 List of all Drawings

A complete list of all Drawings that form a part of the Contract is to be found in Document 00 11 15 (List of Drawing Sheets)

9.2 Technical and Trade Words

Materials or Work described in words that so applied have a well-known technical or trade meaning shall be deemed to refer to recognized standards unless noted otherwise.

9.3 Trade Name or Trade Term

It is not the intention of this Contract to go into detailed descriptions of any materials and/or methods commonly known to the trade under “trade name” or “trade term.” The mere mention or notation of “trade name” or “trade term” shall be considered a sufficient notice to Contractor that it will be required to complete the work so named, complete, finished, and operable, with all its appurtenances, according to the best practices of the trade.

9.4 The Naming of any Material and/or Equipment Shall Mean Furnishing

The naming of any material and/or equipment shall mean furnishing and installing of same, including all incidental and accessory items thereto and/or labor, therefore, as per best practices of the trade(s) involved, unless specifically noted otherwise.

9.5 Contract Documents are Complementary

Contract Documents are complementary, and what is called for by one shall be binding as if called for by all. As such, Drawings and Specifications are intended to be fully cooperative and to agree. However, if Contractor observes that Drawings and Specifications are in conflict, Contractor shall promptly notify County and Architect in writing, including by e-mail, and any necessary changes shall be made as provided in the Contract Documents.

9.6 Drawings and Specifications are Intended to Comply with All Laws

Drawings and Specifications are intended to comply with all laws ordinances, rules, and regulations of constituted authorities having jurisdiction, and where referred to in the Contract Documents, the laws, ordinances, rules, and regulations shall be considered as a part of the Contract within the limits specified. Contractor shall bear all expense of correcting work done contrary to said laws, ordinances, rules, and regulations.

9.7 Plans, Drawings, Designs, Specifications are County Property

All copies of Plans, Drawings, Designs, Specifications and copies of other incidental architectural and engineering work, or copies of other Contract Documents furnished by County, are the property of County. They are not to be used by Contractor in other work and, with the exception of signed sets of Contract Documents, are to be returned to County on request at completion of Work or may be used by County as it may require without any additional costs to County. Neither the Contractor nor any Subcontractor, or material or equipment supplier shall own or claim copyright in the Drawings, Specifications, and other documents prepared by the Architect. County hereby grants the Contractor, Subcontractors, sub-subcontractors, and material or equipment suppliers a

limited license to use applicable portions of the Drawings prepared for the Project in the execution of their Work under the Contract Documents.

9.8 Order of Precedence

In the case of discrepancy or ambiguity in the Contract Documents, the order of precedence in Document 00 52 13 (Agreement Form Stipulated sum (Single Prime Contract)) shall prevail.

9.9 Resolution of Discrepancy or Ambiguity

However, in the case of discrepancy or ambiguity solely between and among the Drawings and Specifications, the discrepancy or ambiguity shall be resolved in favor of the interpretation that will provide County with the functionally complete and operable Project described in the Drawings and Specifications.

9.10 County Clarification

In case of ambiguity, conflict, or lack of information, County will furnish clarifications with reasonable promptness. Should any clarification, in the opinion of Contractor, cause an increase in the Contract Price, Contractor may request a change in the Contract Price and/or Contract. Within seven (7) days after receipt of the interpretation or request, Contractor to submit to the Construction Manager a detailed description of the contract requirements that were exceeded and the resulting change in cost.

10. CONTRACTOR'S SUBMITTALS AND SCHEDULES

Refer to Document 01 33 00 "Submittal Procedures." Contractor's submittals shall comply with the provisions and requirements of the Specifications.

10.1 Schedule of Work, Schedule of Submittals, and Schedule of Values

Within TEN (10) calendar days after the date of the Notice to Proceed (unless otherwise specified in the Specifications), the Contractor shall prepare and submit to the County for review, in a form supported by sufficient data to substantiate its accuracy as the County may require:

10.1.1 Preliminary Schedule

A preliminary schedule of construction indicating the starting and completion dates of the various stages of the Work, including any information and following any form as may be specified in the Specifications. Once approved by County, this shall become the Construction Schedule. This schedule shall include and identify all tasks that are on the Project's critical path with a specific determination of the start and completion of each critical path task as well as all contract milestones and each milestone's completion date(s) as may be required by the County.

10.1.2 Preliminary Schedule of Values

A preliminary schedule of values for all of the Work, which must include quantities and prices of items aggregating the Contract Price and must subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction. This preliminary schedule of values shall include, at a minimum, the

following information, and the following structure:

10.1.2.1 Divided into at least the following categories:

- 10.1.2.1.1** Overhead and profit;
- 10.1.2.1.2** Supervision;
- 10.1.2.1.3** General conditions;
- 10.1.2.1.4** Layout;
- 10.1.2.1.5** Mobilization;
- 10.1.2.1.6** Submittals;
- 10.1.2.1.7** Bonds and insurance;
- 10.1.2.1.8** Close-out documentation;
- 10.1.2.1.9** Demolition;
- 10.1.2.1.10** Installation;
- 10.1.2.1.11** Rough-in;
- 10.1.2.1.12** Finishes;
- 10.1.2.1.13** Testing;
- 10.1.2.1.14** Punch list and acceptance.

10.1.2.2 Divided by each of the following areas:

- 10.1.2.2.1** Site work;
- 10.1.2.2.2** By each building;
- 10.1.2.2.3** By each floor.

10.1.3 The preliminary schedule of values shall not provide for values any greater than the following percentages of the Contract value:

10.1.3.1 Mobilization and layout combined to equal not more than 1%;

10.1.3.2 Submittals, samples and shop drawings combined to equal not more than 3%, bonds and insurance combined to equal not more than 2%.

10.1.3.3 Closeout documentation shall have a value in the preliminary schedule of not less than 5%.

10.1.4 Notwithstanding any provision of the Contract Documents to the contrary, payment of the Contractor's overhead, supervision, general conditions costs, and profit, as reflected in the Cost Breakdown, shall be paid by the County in equal installments, based on percentage complete, with the disbursement of Progress Payments and the Final Payment.

10.1.5 Contractor shall certify that the preliminary schedule of values, as submitted to the County, is accurate and reflects the costs as developed in preparing Contractor's bid. The preliminary schedule of values shall be subject to the County's review and approval of the form and content thereof. In the event that the County objects to any

portion of the preliminary schedule of values, the County shall notify the Contractor, in writing, including by e-mail, of the County's objection(s) to the preliminary schedule of values. Within five (5) calendar days of the date of the County's written objection(s), Contractor shall submit a revised preliminary schedule of values to the County for review and approval. The foregoing procedure for the preparation, review, and approval of the preliminary schedule of values shall continue until the County has approved the entirety of the preliminary schedule of values.

10.1.6 Once the preliminary schedule of values is approved by the County, this shall become the Schedule of Values. The Schedule of Values shall not be thereafter modified or amended by the Contractor without the prior consent and approval of the County, which may be granted or withheld in the sole discretion of the County.

10.1.7 Preliminary Schedule of Submittals

A preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals. Once approved by County, this shall become the Submittal Schedule. All submittals shall be forwarded to the County by the date indicated on the approved Submittal Schedule unless an earlier date is necessary to maintain the Construction Schedule, in which case those submittals shall be forwarded to the County so as not to delay the Construction Schedule.

10.1.8 Safety Plan

Contractor's Safety Plan specifically adapted for the Project. Contractor's Safety Plan shall comply with the following requirements:

10.1.8.1 All applicable requirements of California Division of Industrial Safety ("CalOSHA") and/or of the United States Occupational Safety and Health Administration ("OSHA").

10.1.8.2 All provisions regarding Project safety, including all applicable provisions of these General Conditions. Contractor's Safety Plan shall be in English and in the language(s) of the Contractor's and its Subcontractors' employees.

10.1.9 Site Security and Logistics Plan

10.1.9.1 Contractor's Site Logistics and Security Plan, based on the Project's security requirements and to be approved by the County before commencement of the work shall comply with the following requirements and include, but not necessarily be limited to the following: Working Hours, Tool Control, Crew Size, Delivery Plan, Staging Area, Security Clearances, Cutting/Drilling/Demolition, Working around inmates, and Materials Control.

10.1.10 Complete Subcontractor List

The name, address, telephone number, facsimile number, California State Contractors License number, classification, and monetary value of all Subcontracts for parties furnishing labor, material, or equipment for completion of the Project.

10.1.11 General Requirements

10.1.11.1 Contractor must provide all schedules both in hard copy and

electronically, in a format (for example, Microsoft Project or Primavera) approved in advance by the County.

- 10.1.11.2** The County will review the schedules submitted, and the Contractor shall make changes and corrections in the schedules as requested by the County and resubmit the schedules until approved by the County.
- 10.1.11.3** The County shall have the right at any time to revise the schedule of values if, in the County's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.
- 10.1.11.4** All submittals and schedules must be approved by the County before Contractor can rely on them as a basis for payment.

10.2 Monthly Progress Schedule

10.2.1 Upon request by the County, Contractor shall provide a Monthly Progress Schedule to the County. A Monthly Progress Schedule shall update the approved Construction Schedule or the last Monthly Progress Schedule, showing all work completed and to be completed. The monthly Progress Schedule shall be sent within the timeframe requested by the County and shall be in a format acceptable to the County and contain a written narrative of the progress of work that month and any changes, delays, or events that may affect the work. The process for County approval of the Monthly Progress Schedule shall be the same as the process for approval of the Construction Schedule.

10.2.2 Contractor shall also submit Monthly Progress Schedule(s) with all payment applications.

10.3 Material Safety Data Sheets (MSDS)

Contractor is required to ensure Material Safety Data Sheets are available in a readily accessible place at the Work Site for any material requiring a Material Safety Data Sheet per the Federal "Hazard Communication" standard, or employees right to know law. The Contractor is also required to ensure proper labeling on substance brought onto the job site and that any person working with the material or within the general area of the material is informed of the hazards of the substance and follows proper handling and protection procedures. Two additional copies of the Material Safety Data Sheets shall also be submitted directly to the County.

11. SITE ACCESS, CONDITIONS, AND REQUIREMENTS

11.1 Site Investigation

Before bidding on this Work, Contractor shall make a careful investigation of the Site and thoroughly familiarize itself with the requirements of the Contract. By the act of submitting a bid for the Work included in this Contract, Contractor shall be deemed to have made a complete study and investigation, and to be familiar with and accepted the existing conditions of the Site.

11.2 Soils Investigation Report

11.2.1 When a soils investigation report obtained from test holes at Site is available, that report shall be available to the Contractor but shall not be a part of this

Contract. Any information obtained from that report, or any information given on Drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only, is not guaranteed, does not form a part of this Contract, and Contractor may not rely thereon. By submitting its bid, Contractor acknowledges that it has made a visual examination of Site and has made whatever tests Contractor deems appropriate to determine underground condition of the soil.

11.2.2 Contractor agrees that no claim against County will be made by Contractor for damages and hereby waives any rights to damages if, during progress of Work, Contractor encounters subsurface or latent conditions at Site materially differing from those shown on Drawings or indicated in Specifications, or for unknown conditions of an unusual nature that differ materially from those ordinarily encountered in the work of the character provided for in Plans and Specifications, except as indicated in the provisions of these General Conditions regarding trenches, trenching, and/or existing utility lines.

11.3 Access to Work

County and its representatives shall at all times have access to Work wherever it is in preparation or progress, including storage and fabrication. Contractor shall provide safe and proper facilities for such access so that County's representatives may perform their functions.

11.4 Layout and Field Engineering

11.4.1 All field engineering required for layout of this Work and establishing grades for earthwork operations shall be furnished by Contractor at its expense. This Work shall be done by a qualified, California-registered civil engineer approved in writing by County and Architect. Any required "Record" drawings of Site development shall be prepared by the approved civil engineer.

11.4.2 The Contractor shall be responsible for having ascertained pertinent local conditions such as location, accessibility, and general character of the Site and for having satisfied itself as to the conditions under which the Work is to be performed. County shall not be liable for any claim for allowances because of Contractor's error or negligence in acquainting itself with the conditions at the Site.

11.4.3 Contractor shall protect and preserve established benchmarks and monuments and shall make no changes in locations without the prior written approval of County. Contractor shall replace any benchmarks or monuments that are lost or destroyed subsequent to proper notification of County and with County's approval.

11.5 Utilities

Utilities shall be provided as indicated in the Specifications.

11.6 Sanitary Facilities

Sanitary facilities shall be provided as indicated in the Specifications.

11.7 Surveys

Contractor shall provide surveys done by a California-licensed civil engineer surveyor to determine locations of construction, grading, and site work as required to

perform the Work.

11.8 Regional Notification Center

The Contractor, except in an emergency, shall contact the appropriate regional notification center at least two (2) days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement that is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the County, and obtain an inquiry identification number from that notification center. No excavation shall be commenced and/or carried out by the Contractor unless an inquiry identification number has been assigned to the Contractor or any Subcontractor, and the Contractor has given the County the identification number. Any damages arising from Contractor's failure to make appropriate notification shall be at the sole risk and expense of the Contractor. Any delays caused by failure to make appropriate notification shall be at the sole risk of the Contractor and shall not be considered for an extension of the Contract time.

11.9 Existing Utility Lines

11.9.1 Pursuant to Government Code § 4215, County assumes the responsibility for removal, relocation, and protection of main or trunk utility lines and facilities located on the Construction Site at the time of commencement of construction under this Contract with respect to any such utility facilities that are not identified in the Plans and Specifications. Contractor shall not be assessed for liquidated damages for delay in completion of the Project caused by failure of County or the owner of a utility to provide for removal or relocation of such utility facilities.

11.9.2 Locations of existing utilities provided by County shall not be considered exact, but approximate within reasonable margin and shall not relieve Contractor of responsibilities to exercise reasonable care nor costs of repair due to Contractor's failure to do so. County shall compensate Contractor for the costs of locating, repairing damage, not due to the failure of Contractor to exercise reasonable care, and removing or relocating such utility facilities not indicated in the Plans and Specifications with reasonable accuracy, and for equipment necessarily idle during such work.

11.9.3 No provision herein shall be construed to preclude assessment against Contractor for any other delays in completion of the Work. Nothing in this Article shall be deemed to require County to indicate the presence of existing service laterals, appurtenances, or other utility lines, with the exception of main or trunk utility lines. Whenever the presence of these utilities on the Site of the construction Project can be inferred from the presence of other visible facilities, such as buildings, meter junction boxes, on or adjacent to the Site of the construction.

11.9.4 If Contractor, while performing Work under this Contract, discovers utility facilities not identified by County in Contract Plans and Specifications, Contractor shall immediately notify the County and the utility in writing. The cost of repair for damage to above-mentioned visible facilities without prior written notification to the County shall be borne by the Contractor.

11.10 Notification

Contractor understands, acknowledges and agrees that the purpose for prompt notification to the County pursuant to these provisions is to allow the County to investigate the condition so that the County shall have the opportunity to decide how the County desires to proceed as a result of the condition. Accordingly, failure of Contractor to promptly notify the County in writing, including by e-mail, pursuant to these provisions, shall constitute Contractor's waiver of any claim for damages or delay incurred as a result of the condition.

11.11 Hazardous Materials

Contractor shall comply with all provisions and requirements of the Contract Documents related to hazardous materials including, without limitation, Hazardous Materials Procedures, and Requirements.

11.12 No Signs

Neither the Contractor nor any other person or entity shall display any signs not required by law or the Contract Documents at the Site, fences trailers, offices, or elsewhere on the Site without specific prior written approval of the County.

12. TRENCHES

12.1 Trenches Greater Than Five Feet

Pursuant to Labor Code § 6705, if the Contract Price exceeds \$25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of excavation, promptly submit to the County and/or a registered civil or structural engineer employed by the County or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

12.2 Excavation Safety

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the County or by the person to whom authority to accept has been delegated by the County.

12.3 No Tort Liability of County

Pursuant to Labor Code § 6705, nothing in this Article 12 shall impose tort liability upon the County or any of its employees.

12.4 No Excavation Without Permits

The Contractor shall not commence any excavation Work until it has secured all necessary permits including the required CalOSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

12.5 Discovery of Hazardous Waste and/or Unusual Conditions

12.5.1 Pursuant to Public Contract Code § 7104, if the Work involves digging trenches or other excavations that extend deeper than four feet below the Surface, the Contractor shall promptly, and before the following conditions are disturbed, notify the County, in writing, including by e-mail, of any:

- 12.5.1.1** Material that the Contractor believes may be material that is hazardous waste, as defined in § 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law.
- 12.5.1.2** Subsurface or latent physical conditions at the Site differing from those indicated.
- 12.5.1.3** Unknown physical conditions at the Site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

12.5.2 The County shall promptly investigate the conditions, and if it finds that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work, shall issue a Change Order under the procedures described herein.

12.5.3 In the event that a dispute arises between County and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any scheduled completion date provided for in the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by Contract or by law that pertains to the resolution of disputes and protests.

13. INSURANCE AND BONDS

13.1 Insurance

All insurance required of Contractor and/or its Subcontractor(s) shall be in amounts set forth in the Special Conditions and shall include the provisions set forth in this paragraph 13.

13.1.1 Commercial General Liability and Automobile Liability Insurance

- 13.1.1.1** Contractor shall procure and maintain, during the life of this Contract, Commercial General Liability Insurance and Automobile Liability Insurance that shall protect Contractor, County, Construction Manager(s), and Architect(s) from all claims for bodily injury, property damage, personal injury, death, advertising injury, and medical payments arising from operations under this Contract. Contractor shall ensure that Products Liability and Completed Operations coverage and Fire Damage Liability is included within the above policies and within the required limits, or Contractor shall

procure and maintain these coverages separately.

13.1.1.2 Subcontractor: Contractor shall require its Subcontractors if any, to procure and maintain similar Commercial General Liability Insurance and Automobile Liability Insurance with minimum limits equal to the amount required of the Contractor. Contractor shall verify Subcontractor's compliance.

13.1.2 Excess Liability Insurance

13.1.2.1 Contractor shall procure and maintain, during the life of this Contract, Excess Liability Insurance that shall protect Contractor, County, Construction Manager, and Architect in amounts and including the provisions as set forth in the Special Conditions, and that complies with all requirements for Commercial General Liability and Automobile Liability and Employers' Liability Insurance.

13.1.2.2 Subcontractor: Contractor shall require its Subcontractor if any, to procure and maintain similar Excess Liability Insurance with minimum limits equal to the amount required of the Contractor. Contractor shall verify Subcontractor's compliance.

13.1.3 Workers' Compensation and Employers' Liability Insurance

13.1.3.1 In accordance with provisions of § 3700 of the California Labor Code, the Contractor and every Subcontractor shall be required to secure the payment of compensation to its employees.

13.1.3.2 Contractor shall procure and maintain, during the life of this Contract, Workers' Compensation Insurance and Employers' Liability Insurance for all of its employees engaged in work under this Contract, on/or at the Site of the Project. This coverage shall cover, at a minimum, medical and surgical treatment, disability benefits, rehabilitation therapy, and survivors' death benefits. Contractor shall require its Subcontractor if any, to procure and maintain Workers' Compensation Insurance and Employers' Liability Insurance for all employees of Subcontractor. Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by Contractor's insurance. If any class of employee or employees engaged in Work under this Contract, on or at the Site of the Project, is not protected under the Workers' Compensation Statute, Contractor shall provide, or shall cause a Subcontractor to provide, adequate insurance coverage for the protection of any employee not otherwise protected before any of those employee commence work.

13.1.4 Builder's Risk Insurance: Builder's Risk "All-Risk" Insurance.

Contractor shall procure and maintain, during the life of this Contract, Builder's Risk (Course of Construction), or similar first party property coverage acceptable to the County, issued on a replacement cost value basis. The cost shall be consistent with the total replacement cost of all insurable Work of the Project included within the Contract Documents. Coverage is to insure against all risks of accidental physical loss and shall

include without limitation the perils of vandalism and/or malicious mischief (both without any limitation regarding vacancy or occupancy), sprinkler leakage, civil authority, sonic disturbance, earthquake, flood, collapse, wind, fire, war, terrorism, lightning, smoke, and rioting. Coverage shall include debris removal, demolition, increased costs due to enforcement of all applicable ordinances and/or laws in the repair and replacement of damaged and undamaged portions of the property, and reasonable costs for the Architect's and engineering services and expenses required as a result of any insured loss upon the Work and Project, including completed Work and Work in Progress, to the full insurable value thereof.

**13.1.5 Proof of Carriage of Insurance and Other Requirements:
Endorsements and Certificates.**

13.1.5.1 Contractor shall not commence Work, nor shall it allow any Subcontractor to commence Work under this Contract, until Contractor and its Subcontractor have procured all required insurance and Contractor has delivered in duplicate to the County complete endorsements (or entire insurance policies) and certificates indicating the required coverages have been obtained, and the County has approved these documents.

13.1.5.2 Endorsements, certificates, and insurance policies shall include the following:

13.1.5.2.1 A clause stating:

“This policy shall not be amended, canceled or modified and the coverage amounts shall not be reduced until notice has been mailed to County, Architect, and Construction Manager stating date of amendment, modification, cancellation or reduction. Date of amendment, modification, cancellation or reduction may not be less than thirty (30) days after date of mailing notice.”

13.1.5.2.2 Language stating, in particular, those insured, extent of insurance, location and operation to which insurance applies, expiration date, to whom cancellation and reduction notice will be sent, and length of notice period.

13.1.5.3 All endorsements, certificates and insurance policies shall state that County, its Supervisors, employees, and agents, Construction Manager, and Architect are named additional insureds under all policies except Workers' Compensation Insurance and Employers' Liability Insurance. Contractor's and Subcontractors' insurance policies shall be primary and non-contribution to any insurance or self-insurance maintained by County, its Supervisors, employees and/or agents, Construction Manager, and Architect. All endorsements shall waive any right to subrogation against any of the named additional insureds.

13.1.5.4 All policies shall be written on an occurrence form.

13.2 Contract Security - Bonds

13.2.1 Contractor shall furnish two surety bonds issued by a California admitted surety insurer as follows:

13.2.1.1 Performance Bond: A bond in an amount at least equal to one hundred percent (100%) of Contract Price as security for faithful performance of this Contract.

13.2.1.2 Payment Bond: A bond in an amount at least equal to one hundred percent (100%) of the Contract Price as security for payment of persons performing labor and/or furnishing materials in connection with this Contract.

13.2.2 Cost of bonds shall be included in the Bid and Contract Price.

13.2.3 All bonds related to this Project shall be in the forms set forth in these Contract Documents and shall comply with all requirements of the Contract Documents, including, without limitation, the bond forms.

14. WARRANTY/GUARANTEE/INDEMNITY

14.1 Warranty/Guarantee

14.1.1 The Contractor shall obtain and preserve for the benefit of the County, manufacturer's warranties on materials, fixtures, and equipment incorporated into the Work.

14.1.2 In addition to guarantees required elsewhere, Contractor shall, and hereby does guarantee and warrant all Work furnished on the job against all defects for a period of TWO (2) years after the later of the following dates:

14.1.2.1 The date of completion as defined in Public Contract Code § 7107, subdivision (c),

14.1.2.2 The commissioning date for the Project, if any.

14.1.3 At the County's sole option, Contractor shall repair or replace any and all of that Work, together with any other Work that may be displaced in so doing, that may prove defective in workmanship and/or materials within the warranty period specified in Document 00 65 36 Warranty Form, from date of completion as defined above without expense whatsoever to County. In the event of failure of Contractor and/or Surety to commence and pursue with diligence said replacements or repairs within ten (10) days after being notified in writing, including by e-mail, Contractor and Surety hereby acknowledge and agree that County is authorized to proceed to have defects repaired and made good at the expense of Contractor and/or Surety who hereby agree to pay costs and charges therefore immediately on demand. The notice period shall be forty-eight (48) hours for components essential to operation of the facility, including without limitation fire alarms, water, heat, security systems, and electrical systems.

14.1.4 If, in the opinion of County, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to County or to prevent interruption of operations of County, County will attempt to give the notice required above. If Contractor or Surety cannot be contacted or do not comply with County's request for correction within a reasonable time as determined by County, County may, notwithstanding the above provision, proceed to make any and all corrections and/or

provide attentions the County believes are necessary. The costs of correction or attention shall be charged against Contractor and Surety of the guarantees provided in this Article or elsewhere in this Contract.

14.1.5 The above provisions do not in any way limit the guarantees on any items for which a longer guarantee is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish to County all appropriate guarantee or warranty certificates as indicated in the Specifications or upon request by County.

14.1.6 Nothing herein shall limit any other rights or remedies available to County.

14.2 Indemnity

To the fullest extent permitted by California law, the Contractor shall indemnify, defend with legal counsel reasonably acceptable to the County, keep and hold harmless the County and its consultants, the Architect and its consultants, the Construction Manager and its consultants, separate contractors, and their respective board members, officers, representatives, contractors, agents, and employees, in both individual and official capacities (“Indemnitees”), against all suits, claims, liabilities, damages, losses, and expenses caused by, arising out of, resulting from, or incidental to, the performance of the Work under this Contract by the Contractor or its Subcontractors to the full extent allowed by the laws of the State of California, and not to any extent that would render these provisions void or unenforceable, including, without limitation, any such suit, claim, damage, loss, or expense attributable to, without limitation, bodily injury, sickness, disease, death, alleged patent violation or copyright infringement, or to injury to or destruction of tangible property (including damage to the Work itself) including the loss of use resulting therefrom, except to the extent caused solely by the negligence, or willful misconduct of the Indemnitees. The County may participate in the defense of any such claim without relieving Contractor of any obligation hereunder. This agreement and obligation of the Contractor shall not be construed to negate, abridge, or otherwise reduce any right or obligation of indemnity that would otherwise exist as to any party or person described herein. This indemnification, defense, and hold harmless obligation includes any failure or alleged failure by Contractor to comply with any provision of law or the Contract Documents, including, without limitation, any stop notice actions, or liens by the California Department of Labor Standards Enforcement. This indemnity obligation shall be for the full amount of all damage to County, including defense costs, and shall not be limited by any insurance limits.

14.2.1 The Contractor shall give prompt notice to the County in the event of any injury (including death), loss or damage included herein. Without limitation of the provisions herein, if the Contractor’s agreement to indemnify, defend, and hold harmless the Indemnitees against liability for damage arising out of bodily injury to persons or damage to property caused by or resulting from the negligence of any of the Indemnitees shall to any extent be or be determined to be void or unenforceable, it is the intention of the parties that these circumstances shall not otherwise affect the validity or enforceability of the Contractor’s agreement to indemnify, defend, and hold harmless the rest of the Indemnitees and in the case of any such suits, claims, damages, losses, or expenses caused in part by the default, negligence, or act or omission of the Contractor, any Subcontractor,

anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, and in part by any of the Indemnitees, the Contractor shall be and remain fully liable on its agreements and obligations to the full extent permitted by law.

14.2.2 In any and all claims against any of the Indemnitees by any employee of the Contractor, any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the Contractor's indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

14.2.3 Contractor shall place in its Subcontractor agreements and cause its Subcontractors to agree to indemnities and insurance obligations in favor of County and other Indemnitees in the exact form and substance of those contained in these General Conditions (00 72 13). Contractor shall require all Subcontractors to comply with all indemnification and insurance requirements of this agreement. Contractor shall verify Subcontractor's compliance.

15. TIME

15.1 Notice to Proceed

15.1.1 County may issue a Notice to Proceed within ninety (90) days from the date of the Notice of Award. Once Contractor has received the Notice to Proceed, Contractor shall complete the Work within the period of time indicated in the Contract Documents.

15.1.2 In the event that the County desires to postpone issuing the Notice to Proceed beyond this 90-day period, it is expressly understood that with reasonable notice to the Contractor, the County may postpone issuing the Notice to Proceed. It is further expressly understood by Contractor that Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of the issuance of the Notice to Proceed.

15.1.3 If the Contractor believes that a postponement of issuance of the Notice to Proceed will cause a hardship to Contractor, Contractor may terminate the Contract. Contractor's termination due to a postponement shall be by written notice to County within ten (10) days after receipt by Contractor of County's notice of postponement. It is further understood by Contractor that in the event that Contractor terminates the Contract as a result of postponement by the County, the County shall only be obligated to pay Contractor for the Work that Contractor had performed at the time of notification of postponement. Should Contractor terminate the Contract as a result of a notice of postponement, County shall have the authority to award the Contract to the next lowest responsive, responsible bidder.

15.2 Computation of Time / Adverse Weather

15.2.1 The Contractor will only be allowed a time extension for Adverse Weather conditions if requested by Contractor and only if all of the following conditions are met:

15.2.1.1 The weather conditions constitute Adverse Weather, as defined herein and further specified in the Special Conditions;

- 15.2.1.2 Contractor can verify that the Adverse Weather caused delays in excess of seventy-five percent (75%) for at least five hours of the normal labor and equipment force toward completion of the day's current controlling item on the latest accepted schedule;
- 15.2.1.3 The Contractor's crew is dismissed as a result of the Adverse Weather; and
- 15.2.1.4 The number of days of delay for the month exceeds those indicated in the Special Conditions.

15.2.2 A day-for-day extension will only be allowed for those days in excess of those indicated in the Special Conditions. Weather delay time extensions to the contract period will be non-compensable.

15.2.3 The Contractor shall work seven (7) days per week, if necessary, irrespective of inclement weather, to maintain access and the Construction Schedule, and to protect the Work under construction from the effects of Adverse Weather, all at no further cost to the County.

15.2.4 The Contract Time has been determined with consideration given to the average climate weather conditions prevailing in the County in which the Project is located.

15.3 Hours of Work

15.3.1 Sufficient Forces

Contractor and Subcontractors shall continuously furnish sufficient forces to ensure the prosecution of the Work in accordance with the Construction Schedule.

15.3.2 Performance During Working Hours

Work shall be performed during regular working hours as permitted by the appropriate governmental agency except that in the event of an emergency, or when required to complete the Work in accordance with job progress, Work may be performed outside of regular working hours with the advance written consent of the County and approval of any required governmental agencies.

15.4 Progress and Completion

15.4.1 Time of the Essence

Time limits stated in the Contract Documents are of the essence to the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

15.4.2 No Commencement Without Insurance

The Contractor shall not commence operations on the Project or elsewhere prior to the effective date of insurance and bonds. The date of commencement of the Work shall not be changed by the effective date of such insurance. If Contractor commences Work without insurance and bonds, all Work is performed at Contractor's peril and shall not be compensable until and unless Contractor secures bonds and insurance pursuant to

the terms of the Contract Documents and subject to County claim for damages.

15.5 Expeditious Completion

The Contractor shall proceed expeditiously with adequate forces and shall achieve Completion within the Contract Time.

16. EXTENSIONS OF TIME – LIQUIDATED DAMAGES

16.1 Liquidated Damages

Contractor and County hereby agree that the exact amount of damages for failure to complete the Work within the time specified is extremely difficult or impossible to determine. If the Work is not completed within the time specified in the Contract Documents, it is understood that the County will suffer damage. It being impractical and unfeasible to determine the amount of actual damage, it is agreed the Contractor shall pay to County as fixed and liquidated damages, and not as a penalty, the amount set forth in the Agreement for each calendar day of delay in completion, whether substantial or final completion. Contractor and its Surety shall be liable for the amount thereof pursuant to Government Code § 53069.85.

16.2 Excusable Delay

16.2.1 Contractor shall not be charged for liquidated damages because of delays in completion of Work which are not the fault of Contractor or its Subcontractors, including acts of God as defined in Public Contract Code § 7105, acts of enemy, epidemics, and quarantine restrictions. Contractor shall, within five (5) calendar days of beginning of any delay, notify County in writing of causes of delay including documentation and facts explaining the delay. County shall review the facts and extent of any delay and shall grant extension(s) of time for completing Work when, in its judgment, the findings of fact justify an extension. Extension(s) of time shall apply only to that portion of Work affected by delay and shall not apply to other portions of Work not so affected. An extension of time may only be granted if Contractor has timely submitted the Construction Schedule as required herein.

16.2.2 Contractor shall notify the County pursuant to the claims provisions in these General Conditions of any anticipated delay and its cause. Following submission of a claim, the County may determine whether the delay is to be considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work might be delayed thereby.

16.2.3 In the event the Contractor requests an extension of Contract Time for unavoidable delay, such request shall be submitted in accordance with the provisions in the Contract Documents governing changes in Work. When requesting time, requests must be submitted with full justification and documentation. If the Contractor fails to submit justification, it waives its right to a time extension at a later date. Such justification must be based on the official Construction Schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the Scope of Work. Any claim for delay must include the following information as support, without limitation:

16.2.3.1 The duration of the activity relating to the changes in the Work and the

resources (manpower, equipment, material, etc.) required to perform the activities within the stated duration.

16.2.3.2 Specific logical ties to the Contract Schedule for the proposed changes and/or delay showing the activity/activities in the Construction Schedule that are affected by the change and/or delay.

16.2.3.3 A recovery schedule must be submitted.

16.3 No Additional Compensation for Delays Within Contractor's Control

16.3.1 Contractor is aware that governmental agencies, including, without limitation, the Authorities Having Jurisdiction, gas companies, electrical utility companies, water companies, and other agencies may have to approve Contractor-prepared drawings or approve a proposed installation. Accordingly, Contractor shall include in its bid, time for possible review of its drawings and for reasonable delays and damages that may be caused by such agencies. Thus, Contractor is not entitled to make a claim for damages or delays arising from the review of Contractor's drawings.

16.3.2 Contractor shall only be entitled to compensation for delay when all of the following conditions are met:

16.3.2.1 The County is solely responsible for the delay;

16.3.2.2 The delay is unreasonable under the circumstances involved;

16.3.2.3 The delay was not within the contemplation of County and Contractor;
and

16.3.2.4 Contractor complies with the claims procedure of the Contract Documents.

16.4 Float or Slack in the Schedule

Float or slack is the amount of time between the early start date and the late start date, or the early finish date and the late finish date, of any of the activities in the schedule. Float or slack is not for the exclusive use of or benefit of either the County or the Contractor, but its use shall be determined solely by the County.

17. CHANGES IN THE WORK

17.1 No Changes Without Authorization

17.1.1 There shall be no change whatsoever in the Drawings, Specifications, or in the Work without an executed Change Order or a written Construction Change Directive authorized by the County as herein provided. County shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the County's governing board has authorized the same and the cost thereof has been approved in writing by Change Order or Construction Change Directive. No extension of time for performance of the Work shall be allowed hereunder unless claim for such extension is made at the time changes in the Work are ordered, and such time duly adjusted in writing in the Change Order or Construction Change Directive. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications.

17.1.2 Contractor shall perform immediately all work that has been authorized by a fully executed Change Order or Construction Change Directive. Contractor shall be fully responsible for any and all delays and/or expenses caused by Contractor's failure to expeditiously perform this Work.

17.1.3 Should any Change Order result in an increase in the Contract Price, the cost of that Change Order shall be agreed to, in writing, in advance by Contractor and County and be subject to the monetary limitations set forth in Public Contract Code § 20137. In the event that Contractor proceeds with any change in Work without a Change Order executed by the County or Construction Change Directive, Contractor waives any claim for additional compensation or time for that additional work.

17.1.4 Contractor understands, acknowledges, and agrees that the reason for County authorization is so that County may have an opportunity to analyze the Work and decide whether the County shall proceed with the Change Order or alter the Project so that a change in Work becomes unnecessary.

17.2 Architect Authority to Order Minor Changes

The Architect will have authority to order minor changes in the Work not involving any adjustment in the Contract Price, or an extension of the Contract Time, or a change that is inconsistent with the intent of the Contract Documents. These changes shall be effected by written Change Order, Construction Change Directive, or by Architect's response to an RFI.

17.3 Change Orders

17.3.1 A Change Order is a written instrument prepared and issued by the County and/or the Architect and signed by the County (as authorized by the County's Board of Supervisors), the Contractor, and the Architect, stating their agreement regarding all of the following:

- 17.3.1.1** A description of a change in the Work;
- 17.3.1.2** The amount of the adjustment in the Contract Price, if any; and
- 17.3.1.3** The extent of the adjustment in the Contract Time, if any.

17.4 Construction Change Directives

17.4.1 A Construction Change Directive is a written order prepared and issued by the County, the Construction Manager, and/or the Architect and signed by the County and the Architect, directing a change in the Work. The County may as provided by law, by Construction Change Directive and without invalidating the Contract, order changes in the Work consisting of additions, deletions, or other revisions. Any dispute as to the sum of the Construction Change Directive or timing of payment shall be resolved pursuant to the Payment and Claims and Disputes provisions herein.

17.4.2 The County may issue a Construction Change Directive in the absence of agreement on the terms of a Change Order.

17.5 Force Account Directives

17.5.1 When work, for which a definite price has not been agreed upon in advance, is to be paid for on a force account basis, all direct costs necessarily incurred and

paid by the Contractor for labor, material, and equipment used in the performance of that Work, shall be subject to the approval of the County and compensation will be determined as set forth herein.

17.5.2 The County will issue a Force Account Directive to proceed with the Work on a force account basis, and a not-to-exceed budget will be established by the County.

17.5.3 All requirements regarding direct cost for labor, labor burden, material, equipment, and markups on direct costs for overhead and profit described in this section shall apply to Force Account Directives. However, the County will only pay for actual costs verified in the field by the County or its authorized representative on a daily basis.

17.5.4 The Contractor shall be responsible for all cost related to the administration of Force Account Directive. The markup for overhead and profit for Contractor modifications shall be full compensation to the Contractor to administer Force Account Directive.

17.5.5 The Contractor shall notify the County or its authorized representative at least twenty-four (24) hours prior to proceeding with any of the force account work. Furthermore, the Contractor shall notify the County when it has consumed eighty percent (80%) of the budget and shall not exceed the budget unless specifically authorized in writing by the County. The Contractor will not be compensated for force account work in the event that the Contractor fails to timely notify the County regarding the commencement of force account work or exceeding the force account budget.

17.5.6 The Contractor shall diligently proceed with the work, and on a daily basis, submit a daily force account report on a form supplied by the County no later than 5:00 p.m. each day. The report shall contain a detailed itemization of the daily labor, material, and equipment used on the force account work only. The names of the individuals performing the force account work shall be included in the daily force account reports. The type and model of equipment shall be identified and listed. The County will review the information contained in the reports and sign the reports no later than the next workday and return a copy of the report to the Contractor for their records. The County will not sign, nor will the Contractor receive compensation for work the County cannot verify. The Contractor will provide a weekly force account summary indicating the status of each Force Account Directive in terms of percent complete of the not-to-exceed budget and the estimated percent complete of the work.

17.5.7 In the event the Contractor and the County reach a written agreement on a set cost for the work while the work is proceeding based on a Force Account Directive, the Contractor's signed daily force account reports shall be discontinued, and all previously signed reports shall be invalid.

17.6 Price Request

17.6.1 Definition of Price Request

A Price Request ("PR") is a written request prepared by the Architect requesting the Contractor to submit to the County and the Architect an estimate of the effect of a proposed change in the Work on the Contract Price and the Contract

Time.

17.6.2 Scope of Price Request

A Price Request shall contain adequate information, including any necessary Drawings and Specifications, to enable Contractor to provide the cost breakdowns required herein. The Contractor shall not be entitled to any additional compensation for preparing a response to a Price Request, whether ultimately accepted or not.

17.7 Proposed Change Order

17.7.1 Definition of Proposed Change Order

A Proposed Change Order (“PCO”) is a written request prepared by the Contractor requesting that the County and the Architect issue a Change Order based upon a proposed change to the Work.

17.7.2 Changes in Contract Price

A PCO shall include breakdowns pursuant to the revisions herein to validate any change in Contract Price.

17.7.3 Changes in Time

A PCO shall also include any changes in time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change but must be based upon the impact to the Construction Schedule as defined in the Contract Documents. If Contractor fails to request a time extension in a PCO, then the Contractor is thereafter precluded from requesting time and/or claiming a delay.

17.7.4 Unknown and/or Unforeseen Conditions

If Contractor submits a PCO requesting an increase in Contract Price and/or Contract Time that is based at least partially on Contractor’s assertion that Contractor has encountered unknown and/or unforeseen condition on the Project, then Contractor shall base the PCO on provable information that, beyond a reasonable doubt and to the County’s satisfaction, demonstrates that the unknown and/or unforeseen condition(s) were actually unknown and/or unforeseen and that the condition were reasonably unknown and/or unforeseen. If not, the County shall deny the PCO, and the Contractor shall complete the Project without any increase in Contract Price and/or Contract Time based on that PCO.

17.8 Format for Proposed Change

17.8.1 The following format shall be used as applicable by the County and the Contractor (for example, Change Orders or PCO’s) to communicate proposed additions and deductions to the Contract, supported by attached documentation. In no case shall the Contractor’s total mark-up exceed 26.5%.

	<u>SUBCONTRACTOR PERFORMED WORK</u>	<u>ADD</u>	<u>DEDUCT</u>
(a)	<u>Material</u> (attach itemized quantity and unit cost plus sales tax)		
(b)	<u>Add Labor</u> (attach itemized hours and rates, fully encumbered)		
(c)	<u>Add Equipment</u> (attach suppliers' invoice)		
(d)	<u>Subtotal</u>		
(e)	<u>Add Subcontractor's overhead and profit,</u> not to exceed ten percent (10%) of item (d)		
(f)	<u>Subtotal</u>		
(g)	<u>Add Contractor's overhead and profit,</u> not to exceed ten percent (10%) of Item (f)		
(h)	<u>Subtotal</u>		
(i)	<u>Add Bond and Insurance,</u> not to exceed one percent (1%) of Item (h)		
(j)	<u>TOTAL</u>		

(k)	<u>Time</u>	<u>Days</u>	
	<u>CONTRACTOR PERFORMED WORK</u>	<u>ADD</u>	<u>DEDUCT</u>
(a)	<u>Material</u> (attach itemized quantity and unit cost plus sales tax)		
(b)	<u>Add Labor</u> (attach itemized hours and rates, fully encumbered)		
(c)	<u>Add Equipment</u> (attach suppliers' invoice)		
(d)	<u>Subtotal</u>		
(e)	<u>Add Contractor's overhead and profit</u> , not to exceed ten percent (10%) of item (d)		
(f)	<u>Subtotal</u>		
(g)	<u>Add Bond and Insurance</u> , not to exceed one percent (1%) of Item (f)		
(h)	<u>TOTAL</u>		
(i)	<u>Time</u>	<u>Days</u>	

17.9 Change Order Certification

17.9.1 All Change Orders and PCOs must include the following certification by the Contractor:

17.9.1.1 The undersigned Contractor approves the foregoing as to the changes, if any, and the Contract Price specified for each item and as to the extension of time allowed, if any, for completion of the entire Work as stated herein, and agrees to furnish all labor, materials, and service, and perform all work necessary to complete any additional work specified for the consideration stated herein. Submission of sums which have no basis in fact or which Contractor knows are false are at the sole risk of Contractor and may be a violation of the False Claims Act set forth under Government Code § 12650, et seq. It is understood that the changes herein to the Contract shall only be effective when approved by the Board of Supervisors.

17.9.1.2 It is expressly understood that the value of the extra Work or changes expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the

Project or resulting from delay to the Project. Any costs, expenses, damages, or time extensions not included are deemed waived.

17.10 Determination of Change Order Cost

The amount of the increase or decrease in the Contract Price from a Change Order, if any, shall be determined by one or more of the following ways as applicable to a specific situation and at the County's discretion:

17.10.1 County acceptance of a PCO;

17.10.2 By unit prices contained in Contractor's original bid;

17.10.3 By agreement between County and Contractor.

17.11 Allowable Costs

Allowable costs for any change order shall be limited to the following:

17.11.1 Costs of labor, including social security, Medicare, and unemployment insurance, fringe benefits, required workers' compensation insurance.

17.11.2 Costs of first line supervision labor, including labor burden as described in paragraph 1. "First-Line Supervision" shall mean a working foreman or lead craft worker other than the project superintendent;

17.11.3 Actual costs of the project superintendent associated with any period of compensable delay caused by issuance of the change order. In the absence of a compensable delay, all of the project superintendent's time is considered to have been paid for as part of the overhead;

17.11.4 Actual costs of materials, including sales tax and delivery;

17.11.5 Rental costs of machinery and equipment, exclusive of small tools, whether rented from the Contractor or others. For Contractor and Subcontractor-owned equipment, payment will be made at rental rates listed for equipment in California Department of Transportation official equipment rental rate schedule. For rental equipment, payment will be made based on actual rental invoices. Rental rates paid shall be deemed to cover cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance and all incidentals;

17.11.6 Overhead and Profit as specified below. "Overhead" shall include the following:

17.11.6.1 Preparation of all paperwork related to changes in the Work, including field review, estimating and cost breakdown; coordination and supervision, both office and field, including the project superintendent; vehicles including has and maintenance; small tools, incidentals and consumables; engineering, detailing, and revisions to shop drawings and as-built drawings; general office expense; extended and unabsorbed home office overhead; warranty, all taxes; and all other expenses not specifically described in paragraph 17.11 items 17.11.1 through 17.11.5.

17.11.6.2 The actual costs of insurance premiums required by this contract and

associated with the change order work will be reimbursed by the County

17.11.7 Upon receipt of a PCO or Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Construction Manager within seven (7) calendar days of the Contractor's agreement or disagreement with the method, if any, provided in the PCO or Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

17.11.8 Failure to respond to and return a PCO or Change Directive to the County within (7) days indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

17.12 Deductive Change Orders

All deductive Change Order must be prepared pursuant to the provisions herein. If Contractor offers a proposed amount for a Deductive Change Order, Contractor shall include a minimum of five percent (5%) total profit and overhead to be deducted with the amount of the work of the Change Order. If Subcontractor work is involved, Subcontractors shall also include a minimum of five percent (5%) profit and overhead to be deducted with the amount of its deducted work. Any deviation from this provision shall not be allowed.

17.13 Discounts, Rebates, and Refunds

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Contractor, and the Contractor shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction in the Contractor's cost in determining the actual cost of construction for purposes of any change, addition, or omission in the Work as provided herein.

17.14 Accounting Records

With respect to portions of the Work performed by Change Orders and Construction Change Directives, the Contractor shall keep and maintain cost-accounting records satisfactory to the County, which shall be available to the County on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents.

17.15 Notice Required

If the Contractor desires to make a claim for an increase in the Contract Price or any extension of the Contract Time for completion, it shall notify the County pursuant to the provisions herein. No claim shall be considered unless made in accordance with this subparagraph. Contractor shall proceed to execute the Work, even though, the adjustment may not have been agreed upon. Any change in the Contract Price or extension of the Contract Time resulting from such claim shall be authorized by a Change Order.

17.16 Applicability to Subcontractors

Any requirements under this Article shall be equally applicable to Change Orders, or Construction Change Directives issued to Subcontractors by the Contractor to the extent as required by the Contract Documents.

17.17 Alteration to Change Order Language

Contractor shall not alter Change Orders or reserve time in Change Orders. Contractor shall execute finalized Change Orders and proceed under the provisions herein with proper notice.

17.18 Failure of Contractor to Execute Change Order

Contractor shall be in default of the Contract if Contractor fails to execute a Change Order when the Contractor agrees with the addition and/or deletion of the Work in that Change Order.

18. REQUEST FOR INFORMATION

18.1 Contractor

The Contractor shall coordinate the Work so that dimensions are verified, and clarifications that may affect the work are identified to allow for resolution without delaying the Work. The Contractor is responsible to submit a Request for Information as soon as the issue requiring clarification is identified. The Contractor shall be responsible for any delay in the construction progress due to any untimely submission of a Request for Information for the Architect's or Engineer's review. Non-receipt of a Request for Information, or proceeding with Work pertaining to the Request for Information shall be construed as relieving the County of any Claim for added cost or extension of time.

18.2 Reference Contract Documents

Any Request for Information shall reference all applicable Contract Document(s), including Specification section(s), detail(s), page number(s), drawing number(s), and sheet number(s), etc. The Contractor shall make suggestions and interpretations of the issue raised by each Request for Information. A Request for Information cannot modify the Contract Price, Contract Time, or the Contract Documents.

18.3 Contractor Responsible for Costs

Contractor shall be responsible for any costs incurred for professional services which County may deduct from any amounts owing to the Contractor if a Request for Information requests an interpretation or decision of a matter where the information sought is equally available to the party making the request. County, at its sole discretion, shall deduct from and/or invoice Contractor for all the professional services arising herein.

19. PAYMENTS

19.1 Contract Price

The Contract Price is stated in the Agreement and, including authorized adjustments, is the total amount payable by the County to the Contractor for performance of the Work under the Contract Documents.

19.2 Applications for Progress Payments

19.2.1 Procedures for Applications for Progress Payments

- 19.2.1.1** Not before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the County and the Architect an itemized Application for Payment for operations completed (or each portion thereof) in accordance with the Schedule of Values. Such application shall be notarized, if required and supported by the following unless waived by the County in writing:
- 19.2.1.1.1** The amount paid to the date of the Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;
 - 19.2.1.1.2** The amount being requested under the Application for Payment by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;
 - 19.2.1.1.3** The balance that will be due to each of such entities after the payment is made;
 - 19.2.1.1.4** A certification that the Record Drawings and annotated Specifications are current;
 - 19.2.1.1.5** Itemized breakdown of work done for the purpose of requesting partial payment;
 - 19.2.1.1.6** An updated and acceptable construction schedule in conformance with § 10.2 above;
 - 19.2.1.1.7** The additions to and subtractions from the Contract Price and Contract Time;
 - 19.2.1.1.8** A total of the retention held;
 - 19.2.1.1.9** Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the County may require from time to time;
 - 19.2.1.1.10** The percentage of completion of the Contractor's Work by line item;
 - 19.2.1.1.11** Schedule of Values updated from the preceding Application for Payment;
 - 19.2.1.1.12** A duly completed and executed conditional waiver and release upon progress payment compliant with Civil Code § 8132 from the Contractor and each subcontractor of any tier and supplier to be paid from the current progress payment;
 - 19.2.1.1.13** A duly completed and executed unconditional waiver

and release upon progress payment compliant with Civil Code § 8134 from the Contractor and each subcontractor of any tier and supplier that was paid from the previous progress payment; and

19.2.1.1.14 A certification by the Contractor of the following:

The Contractor warrants title to all Work performed as of the date of this payment application. The Contractor further warrants that all Work performed as of the date of this payment application is free and clear of liens, claims, security interests, or encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, workers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work, except those of which the County has been informed.

19.2.2 The Contractor shall be subject to the False Claims Act set forth under Government Code § 12650 et seq., for information provided with any Application for Progress Payment.

19.2.3 Prerequisites for Progress Payments

19.2.3.1 First Payment Request: The following items, if applicable, must be completed before the County will accept and/or process the Contractor's first payment request:

19.2.3.1.1 Installation of the Project sign, if required;

19.2.3.1.2 Installation of field office;

19.2.3.1.3 Installation of temporary facilities and fencing;

19.2.3.1.4 Schedule of Values;

19.2.3.1.5 Contractor's Construction Schedule in conformance with § 10.1.1 above;

19.2.3.1.6 Schedule of unit prices, if applicable;

19.2.3.1.7 Submittal Schedule;

19.2.3.1.8 Receipt by Architect of all submittals due as of the date of the payment application;

19.2.3.1.9 Copies of necessary permits;

19.2.3.1.10 Copies of authorizations and licenses from governing authorities;

19.2.3.1.11 Initial progress report;

19.2.3.1.12 Surveyor qualifications;

19.2.3.1.13 Written acceptance of County's survey of rough grading, if applicable;

19.2.3.1.14 List of all Subcontractors, with names, license numbers, telephone numbers, and Scope of Work;

19.2.3.1.15 All bonds and insurance endorsements;

19.2.3.1.16 Resumes of Contractor's project manager, and if applicable, job site secretary, record documents recorder, and job site superintendent; and

19.2.3.1.17 Safety plan.

19.2.3.2 Second Payment Request. The County will not process the second payment request until and unless all submittals and Shop Drawings have been accepted for review by the Architect, and Contractor's Schedule has been accepted as in compliance with § 10.2 above.

19.2.3.3 No Waiver of Criteria. Any payments made to Contractor where criteria set forth herein have not been met shall not constitute a waiver of said criteria by County. Instead, such payment shall be construed as a good faith effort by County to resolve differences so Contractor may pay its Subcontractors and suppliers. Contractor agrees that failure to submit such items may constitute a breach of contract by Contractor and may subject Contractor to termination.

19.3 Progress Payments

19.3.1 County's Approval of Application for Payment

19.3.1.1 Upon receipt of an Application for Payment, the County shall act in accordance with both of the following:

19.3.1.1.1 Each Application for Payment shall be reviewed by the County as soon as practicable after receipt for the purpose of determining that the Application for Payment is a proper Application for Payment.

19.3.1.1.2 Any Application for Payment determined not to be a proper Application for Payment suitable for payment shall be returned to the Contractor as soon as practicable, but not later than seven (7) calendar days, after receipt. An Application for Payment returned pursuant to this paragraph shall be accompanied by a document setting forth in writing, including by e-mail, the reasons why the Application for Payment is not proper. The number of days available to the County to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which the County exceeds this seven-day return requirement.

19.3.1.1.3 An Application for Payment shall be considered properly executed if funds are available for payment of the Application for Payment, and payment is not delayed due to an audit inquiry by the financial officer of the County.

19.3.1.2 The County's review of the Contractor's Application for Payment will be based on the County's and the Architect's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the

County's and the Architect's knowledge, information, and belief, the quality of the Work is in accordance with the Contract Documents. The foregoing representations are subject to:

19.3.1.2.1 Observation of the Work for general conformance with the Contract Documents,

19.3.1.2.2 Results of subsequent tests and inspections,

19.3.1.2.3 Minor deviations from the Contract Documents correctable prior to completion, and

19.3.1.2.4 Specific qualifications expressed by the Architect.

19.3.1.3 County's approval of the certified Application for Payment shall be based on Contractor complying with all requirements for a fully complete and valid certified Application for Payment.

19.3.2 Payments to Contractor

19.3.2.1 Within thirty (30) days after approval of the Application for Payment, Contractor shall be paid a sum equal to ninety five percent (95%) of the value of the Work performed (as verified by Architect and certified by Contractor) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld by the County as retention. The value of the Work completed shall be Contractor's best estimate. No inaccuracy or error in said estimate shall operate to release the Contractor, or any Surety upon any bond, from damages arising from such Work, or from the County's right to enforce each and every provision of this Contract, and the County shall have the right subsequently to correct any error made in any estimate for payment.

19.3.2.2 The Contractor shall not be entitled to have any payment requests processed or be entitled to have any payment made for Work performed, so long as any lawful or proper direction given by the County concerning the Work or any portion thereof remains incomplete.

19.3.2.3 If the County fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted Application for Payment by the Contractor, the County shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of § 685.010 of the Code of Civil Procedure.

19.3.3 No Waiver

No payment by County hereunder shall be interpreted to imply that County has inspected, approved, or accepted any part of the Work. Notwithstanding any payment, the County may enforce each and every provision of this Contract. The County may correct or require correction of any error subsequent to any payment.

19.3.4 Removal of Liens

- 19.3.4.1** If a lien or a claim based on a stop notice of any nature should at any time be filed against the Work or any County property, by any entity that has supplied material or services at the request of the Contractor, Contractor and Contractor's Surety shall promptly, on demand by County and at Contractor's and Surety's own expense, take any and all action necessary to cause any such lien or a claim based on a stop notice to be released or discharged immediately therefrom.
- 19.3.4.2** If the Contractor or the Contractor's surety fails to furnish to the County within ten (10) calendar days after demand by the County, satisfactory evidence that a lien or a claim based on a stop notice has been so released, discharged, or secured, the County may discharge such indebtedness and deduct the amount required therefor, together with any and all losses, costs, damages, and attorney's fees and expense incurred or suffered by County from any sum payable to Contractor under the Contract.

19.4 Decisions to Withhold Payment

19.4.1 Reasons to Withhold Payment

The County may withhold payment in whole, or in part, to the extent reasonably necessary to protect the County if, in the County's opinion, the representations to the County required herein cannot be made. The County may withhold payment, in whole, or in part, to such extent as may be necessary to protect the County from loss because of, but not limited to:

- 19.4.1.1** Defective Work not remedied within the time frames noted in § 14.1 hereof of written notice to Contractor;
- 19.4.1.2** Stop Notices, or other liens served upon the County as a result of the Contract;
- 19.4.1.3** Liquidated damages assessed against the Contractor;
- 19.4.1.4** The cost of completion of the Contract, if there exists reasonable doubt that the Work can be completed for the unpaid balance of the Contract Price or by the completion date;
- 19.4.1.5** Damage to the County or other contractor;
- 19.4.1.6** Unsatisfactory prosecution of the Work by the Contractor;
- 19.4.1.7** Failure to store and properly secure materials;
- 19.4.1.8** Failure of the Contractor to submit, on a timely basis, proper, sufficient, and acceptable documentation required by the Contract Documents, including, without limitation, a Construction Schedule, Schedule of Submittals, Schedule of Values, Monthly Progress Schedules, Shop Drawings, Product Data and Samples, Proposed product lists, executed Change Orders, and/or properly completed Elation updates;
- 19.4.1.9** Failure of the Contractor to maintain Record Drawings;

- 19.4.1.10 Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;
- 19.4.1.11 Unauthorized deviations from the Contract Documents;
- 19.4.1.12 Failure of the Contractor to prosecute the Work in a timely manner in compliance with the Construction Schedule established progress schedules, and/or completion dates;
- 19.4.1.13 Failure to properly pay prevailing wages as defined in Labor Code § 1720 et seq., and/or failure to comply with any other Labor Code requirements,
- 19.4.1.14 Failure to properly maintain or clean up the Site;
- 19.4.1.15 Payments to indemnify, defend, or hold harmless the County;
- 19.4.1.16 Any payments due to the County, including but not limited to payments for failed tests, utility changes or permits;
- 19.4.1.17 Failure to pay Subcontractor or supplier as required by law and by the Contract Documents; or
- 19.4.1.18 Contractor is otherwise in breach, default, or in substantial violation of any provision of this Contract.

19.4.2 Reallocation of Withheld Amounts

- 19.4.2.1 County may, at its discretion, apply any withheld amount to pay outstanding claims or obligations as defined herein. In so doing, County shall make such payments on behalf of Contractor. If any payment is so made by County, then that amount shall be considered a payment made under Contract by County to Contractor and County shall not be liable to Contractor for any payment made in good faith. These payments may be made without prior judicial determination of claim or obligation. County will render Contractor an accounting of funds disbursed on behalf of Contractor.
- 19.4.2.2 If Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents or fails to perform any provision thereof, County may, after FORTY-EIGHT (48) hours written notice to the Contractor and, without prejudice to any other remedy, make good such deficiencies. The County shall adjust the total Contract Price by reducing the amount thereof by the cost of making good such deficiencies. If County deems it inexpedient to correct Work that is damaged, defective, or not done in accordance with Contract provisions, an equitable reduction in the Contract Price (of at least one hundred twenty-five percent (125%) of the estimated reasonable value of the nonconforming Work) shall be made therefor.

19.4.3 Payment After Cure

When Contractor removes the grounds for declining approval, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage

or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

19.5 Subcontractor Payments

19.5.1 Payments to Subcontractors

No later than seven (7) days after receipt, or pursuant to Business and Professions Code § 7108.5 and Public Contract Code § 7107, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to its Sub-subcontractors in a similar manner.

19.5.2 No Obligation of County for Subcontractor Payment

The County shall have no obligation to pay or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

19.5.3 Joint Checks

County shall have the right in its sole discretion if necessary for the protection of the County, to issue joint checks made payable to the Contractor and Subcontractors and/or material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the County and a Subcontractor or supplier of any tier, any obligation from the County to such Subcontractor or supplier, or rights in such Subcontractor or supplier against the County.

20. COMPLETION OF THE WORK

20.1 Completion

20.1.1 County will accept completion of the Contract and have the Notice of Completion recorded when the entire Work shall have been completed to the satisfaction of County.

20.1.2 The Work may only be accepted as complete by action of the County Board of Supervisors.

20.1.3 County, at its sole option, may accept completion of Contract and have the Notice of Completion recorded when the entire Work shall have been completed to the satisfaction of County, except for minor corrective items, as distinguished from incomplete items. If Contractor fails to complete all minor corrective items within thirty (30) days after the date of the County's acceptance of final completion, County shall withhold from the final payment one hundred fifty percent (150%) of an estimate of the amount sufficient to complete the corrective items, as determined by County, until the item(s) are completed.

20.1.4 At the end of the thirty-five (35) day period, if there are any items remaining to be corrected, County may elect to proceed as provided herein related to

adjustments to Contract Price, and/or County's right to perform the Work of the Contractor.

20.2 Close-Out Procedures

20.2.1 Punch List

The Contractor shall notify the Architect when Contractor considers the Work complete. Upon notification, Architect will prepare a list of minor items to be completed or corrected ("Punch List"). The Contractor and/or its Subcontractors shall proceed promptly to complete and correct items on the Punch List. Failure to include an item on Punch List does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

20.2.2 Close-Out Requirements

20.2.2.1 Utility Connections

Buildings shall be connected to water, gas, sewer, and electric services, complete and ready for use. Service connections shall be made, and existing services reconnected.

20.2.2.2 Record Drawings

20.2.2.2.1 Contractor shall provide exact "as-built" Record Drawings of the Work upon completion of the Project as indicated in the Specifications.

20.2.2.2.2 Contractor is liable and responsible for any and all inaccuracies in as-built Record Drawings, even if inaccuracies become evident at a future date.

20.2.2.2.3 Upon completion of the Work and as a condition precedent to approval of final payment, Contractor shall obtain the Architect's approval of the corrected prints and employ a competent draftsman to transfer the "as-built" information to the most current version of AutoCAD that is, at that time, currently utilized for plan check submission by either the County, the Construction Manager and/or the Architect, and submit electronic files. When completed, Contractor shall deliver corrected electronic files acceptable to County with AutoCAD file to the County.

20.2.2.2.4 Maintenance Manuals: Contractor shall prepare all operation and maintenance manuals and date as indicated in the Specifications.

20.3 Final Inspection

20.3.1 Contractor shall comply with Punch List procedures as provided herein and maintain the presence of a Project Superintendent and Project Manager until the Punch List is complete to ensure proper and timely completion of the Punch List.

Under no circumstances shall Contractor demobilize its forces prior to completion of the

Punch List. Upon receipt of Contractor's written notice that all of the Punch List items have been fully completed, and the Work is ready for final inspection and acceptance, Architect and Construction Manager will inspect the Work and shall submit to Contractor and County a final inspection report noting the Work, if any, required in order to complete in accordance with the Contract Documents. Absent unusual circumstances, this report shall consist of the Punch List items not yet satisfactorily completed.

20.3.2 Upon Contractor's completion of all items on the Punch List and any other uncompleted portions of the Work, the Contractor shall notify the County and Architect, who shall again inspect such Work. If the Architect finds the Work complete and acceptable under the Contract Documents, the Architect will notify Contractor, who shall then jointly submit to the Architect and the County its final Application for Payment.

20.3.3 Final Inspection Requirements

Before calling for final inspection, Contractor shall determine that the following have been performed:

- 20.3.3.1** The Work has been completed.
- 20.3.3.2** All life-safety items are completed and in working order.
- 20.3.3.3** Mechanical and Electrical Work are complete and tested, fixtures are in place, connected, and ready for tryout.
- 20.3.3.4** Electrical circuits scheduled in panels and disconnect switches labeled.
- 20.3.3.5** Painting and special finishes complete.
- 20.3.3.6** Doors complete with hardware, cleaned of protective film, relieved of sticking or binding, and in working order.
- 20.3.3.7** Tops and bottoms of doors sealed.
- 20.3.3.8** Floors waxed and polished as specified.
- 20.3.3.9** Broken glass replaced and glass cleaned.
- 20.3.3.10** Grounds cleared of Contractor's equipment, raked clean of debris, and trash removed from Site.
- 20.3.3.11** Work cleaned, free of stains, scratches, and other foreign matter, of damaged and broken material, replaced.
- 20.3.3.12** Finished and decorative work shall have marks, dirt, and superfluous labels removed.
- 20.3.3.13** Final cleanup, as provided herein.
- 20.3.3.14** Any other items contained in the Scope of Work.

20.4 Costs of Multiple Inspections

More than two (2) requests of the County to make a final inspection shall be considered an additional service of County, Architect, and/or Construction Manager, and all subsequent costs will be invoiced to Contractor and if funds are available, withheld from remaining payments.

20.5 Partial Occupancy or Use Prior to Completion

20.5.1 County's Rights

The County may occupy or use any completed or partially completed portion of the Work at any stage, including after Substantial Completion. The County and the Contractor shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. Any dispute as to responsibilities shall be resolved pursuant to the Claims and Disputes provisions herein, with the added provision that during the dispute process, the County shall have the right to occupy or use any portion of the Work that it needs or desires to use.

20.5.2 Inspection Prior to Occupancy or Use

Immediately prior to partial occupancy or use, the County, the Contractor, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

20.5.3 No Waiver

Unless otherwise agreed upon, partial or entire occupancy or use of a portion or portions of the Work shall not constitute beneficial occupancy or acceptance of the Work not complying with the requirements of the Contract Documents.

21. FINAL PAYMENT AND RETENTION

21.1 Final Payment

Upon receipt and approval of a valid and final Application for Payment, the Architect will issue a final Certificate of Payment. The County and Contractor shall thereupon jointly inspect the Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work is not complete. Upon acceptance of the Work of the Contractor as fully complete (that, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the County shall record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of final payment from the County, pay the amount, due Subcontractors.

21.2 Prerequisites for Final Payment

The following conditions must be fulfilled prior to Final Payment:

21.2.1 A full and final waiver or release of all Stop Notices in connection with the Work shall be submitted by Contractor, including a release of Stop Notice in recordable form, together with (to the extent permitted by law) a copy of the full and final release of all Stop Notice rights.

21.2.1.1 A duly completed and executed conditional waiver and release upon final payment compliant with Civil Code § 8136 from the Contractor

and each subcontractor of any tier and supplier to be paid from the current progress payment;

21.2.1.2 A duly completed and executed unconditional waiver and release upon progress payment compliant with Civil Code § 8134 from the Contractor and each subcontractor of any tier and supplier that was paid from the previous progress payment; and

21.2.1.3 The Contractor shall have made all corrections to the Work that are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of County required under the Contract Documents.

21.2.2 Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work.

21.2.3 Contractor must have completed all requirements set forth under “Close-Out Procedures,” including, without limitation, an approved set of complete “as-built” Record Drawings.

21.2.4 Architect shall have issued its written approval that final payment can be made.

21.2.5 The Contractor shall have delivered to the County all manuals and materials required by the Contract Documents.

21.2.6 The Contractor shall have completed final clean up as provided herein.

21.3 Retention

21.3.1 The retention, less any amounts disputed by the County or that the County has the right to withhold pursuant to provisions herein, shall be paid:

21.3.1.1 After approval of the County by the Architect’s Certificate of Payment,

21.3.1.2 After the satisfaction of the conditions set forth herein, and

21.3.1.3 After thirty-five (35) days after the recording of the Notice of Completion by County.

21.3.2 No interest shall be paid on any retention, or on any amounts withheld due to a failure of the Contractor to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any Escrow Agreement between the County and the Contractor pursuant to Public Contract Code § 22300.

21.4 Substitution of Securities

The County will permit the substitution of securities in accordance with the provisions of Public Contract Code § 22300.

22. UNCOVERING OF WORK

If a portion of the Work is covered without Architect approval or not in compliance with the Contract Documents, it must, if required in writing, which may include email, by the County or the Architect, be uncovered for the Architect's observation and be replaced at the Contractor's expense without change in the Contract Price or Contract Time.

If a portion of the Work has been covered, which the Project Inspector or the Architect has not specifically requested to observe prior to it being covered, the County, Project Inspector, or the Architect may request to see that Work, and it shall be uncovered by the Contractor. If that Work is in accordance with the Contract Documents, costs of uncover and replacement shall, by appropriate Change Order, be charged to the County. If that Work is not in accordance with Contract Documents, the Contractor shall pay these costs without a change in the Contract Time, unless the condition was caused by the County or a separate contractor, in which event the County shall be responsible for payment of such costs to the Contractor.

23. NONCONFORMING WORK, CORRECTION OF WORK AND COUNTY'S RIGHT TO PERFORM WORK

23.1 Nonconforming Work

23.1.1 Contractor shall promptly remove from Premises all Work identified by County as failing to conform to the Contract Documents whether incorporated or not. Contractor shall promptly replace and re-execute nonconforming Work to comply with the Contract Documents without additional expense to the County and shall bear the expense of making good all work of other contractors destroyed or damaged by any removal or replacement pursuant hereto and/or any delays to the County or other Contractors caused thereby.

23.1.2 If Contractor does not remove Work that County has identified as failing to conform to the Contract Documents within a reasonable time, not to exceed FORTY-EIGHT (48) hours, County may remove it and may store any material at Contractor's expense. If Contractor does not pay the expense of that removal within ten (10) days' time thereafter, County may, upon ten (10) days' written notice, sell any material at auction or at private sale and shall deduct all costs and expenses incurred by the County and/or County may withhold those amounts from payment(s) to Contractor.

23.2 Correction of Work

23.2.1 Correction of Rejected Work

Pursuant to the notice provisions herein, the Contractor shall promptly correct the Work rejected by the County or the Architect as failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not fabricated, installed, or completed. The Contractor shall bear costs of correcting the rejected Work, including additional testing, inspections, and compensation for the Architect's services and expenses made necessary thereby.

23.2.2 Warranty Corrections

If, within the warranty period specified in Document 00 65 36 Warranty Form,

after the date of Final Completion of the Work or a designated portion thereof, or after the date of commencement of warranties established hereunder, or by the terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the County to do so. This warranty period of two (2) years shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. This obligation shall survive acceptance of the Work under the Contract and termination of the Contract. The County shall give such notice promptly after discovery of the condition.

23.3 County's Right to Perform Work

23.3.1 If the Contractor should neglect to prosecute the Work properly or fail to perform any provisions of this contract, the County, after FORTY-EIGHT (48) hours written notice to the Contractor, may, without prejudice to any other remedy it may have, make good such deficiencies and may deduct the cost thereof from the payment then or thereafter due the Contractor.

23.3.2 If it is found at any time, before or after completion of the Work, that Contractor has varied from the Drawings or Specifications, including, but not limited to, variation in material, quality, form, or finish, or in the amount or value of the materials and labor used, County may require, at its option:

- 23.3.2.1** That all improper Work be removed, remade or replaced, and all work disturbed by these changes be made good by Contractor at no additional cost to the County; or
- 23.3.2.2** That the County deduct from any amount due Contractor the sum of money equivalent to the difference in value between the work performed and that called for by the Drawings or Specifications; or
- 23.3.2.3** That the County exercise any other remedy it may have at law or under the Contract Documents, including but not limited to the County hiring its own forces or another contractor to replace the Contractor's nonconforming Work, in which case the County shall either issue a Deductive Change Order, a Construction Change Directive, or invoice the Contractor for the cost of that work. Contractor shall pay any invoices within thirty (30) days of receipt of same or County may withhold those amounts from payment to Contractor.

24. TERMINATION AND SUSPENSION

24.1 County's Right to Terminate Contractor for Cause

24.1.1 Grounds for Termination.

The County, in its sole discretion, may terminate the Contract and/or terminate the Contractor's right to perform the work of the Contract based upon the following:

- 24.1.1.1** Contractor refuses or fails to execute the Work or any separable part thereof with sufficient diligence as will ensure its completion within

- the time specified or any extension thereof; or
- 24.1.1.2 Contractor fails to complete the Work within the time specified or any extension thereof; or
 - 24.1.1.3 Contractor persistently fails or refuses to perform Work or provide material of sufficient quality as to comply with Contract Documents; or
 - 24.1.1.4 Contractor files a petition for relief as a debtor, or a petition is filed against the Contractor without its consent, and the petition is not dismissed within sixty (60) days; or
 - 24.1.1.5 Contractor makes a general assignment for the benefit of its creditors, or a receiver is appointed on account of its insolvency; or
 - 24.1.1.6 Contractor persistently or repeatedly refuses or fails, except in cases for which extension of time is provided, to supply enough properly skilled workers or proper materials to complete the Work in the time specified; or
 - 24.1.1.7 Contractor fails to make prompt payment to Subcontractors, or for material, or for labor; or
 - 24.1.1.8 Contractor persistently disregards laws or ordinances, or instructions of County; or
 - 24.1.1.9 Contractor fails to supply labor, including that of Subcontractors, that can work in harmony with all other elements of labor employed or to be employed on the Work; or
 - 24.1.1.10 Contractor is or its Subcontractors are otherwise in breach, default, or in substantial violation of any provision of this Contract.

24.1.2 Notification of Termination

- 24.1.2.1 Upon the occurrence of County's sole determination of any of the above conditions, County may, without prejudice to any other right or remedy, serve written notice upon Contractor and its Surety of County's termination of this Contract and/or the Contractor's right to perform the work of the Contract. This notice will contain the reasons for termination. Unless, within three (3) calendar days after the service of the notice, any and all conditions shall cease, and any and all violations shall cease, or arrangement satisfactory to County for the correction of the conditions and/or violations be made, this Contract shall cease and terminate. Upon the County's determination, Contractor shall not be entitled to receive any further payment until the entire Work is finished.
- 24.1.2.2 Upon Termination, County may immediately serve written notice of tender upon Surety whereby Surety shall have the right to take over and perform this Contract only if Surety:

24.1.2.2.1 Within three (3) calendar days after service upon it of

the notice of tender, gives County written notice of Surety's intention to take over and perform this Contract; and

24.1.2.2.2 Commences performance of this Contract within (three (3) days from the date of serving of its notice to County.

24.1.2.3 If Surety fails to notify County or begin performance as indicated herein, County may take over the Work and execute the Work to completion by any method it may deem advisable at the expense of Contractor and/or its Surety. Contractor and/or its Surety shall be liable to County for any excess cost or other damages the County incurs thereby. Time is of the essence in this Contract. If the County takes over the Work as herein provided, County may, without liability for so doing, take possession of and utilize in completing the Work such materials, appliances, plan, and other property belonging to Contractor as may be on the Site of the Work, in bonded storage, or previously paid for.

24.1.3 Effect of Termination

24.1.3.1 Contractor shall, only if ordered to do so by the County, immediately remove from the Site all or any materials and personal property belonging to Contractor that have not been incorporated in the construction of the Work, or which are not in place in the Work. The County retains the right, but not the obligation, to keep and use any materials and personal property belonging to Contractor that have not been incorporated in the construction of the Work, or which are not in place in the Work. The Contractor and its Surety shall be liable upon the performance bond for all damages caused the County by reason of the Contractor's failure to complete the Contract.

24.1.3.2 In the event that the County shall perform any portion of, or the whole of the Work, pursuant to the provisions of the General Conditions, the County shall not be liable nor account to the Contractor in any way for the time or the manner in which the Work is performed by the County or for any changes the County may make in the Work or for the money expended by the County in satisfying claims, suits, and/or other obligations in connection with the Work.

24.1.3.3 In the event that the Contract is terminated for any reason, no allowances or compensation will be granted for the loss of any anticipated profit by the Contractor.

24.1.3.4 If the expense to the County to finish the Work exceeds the unpaid Contract Price, Contractor and Surety shall pay the difference to County within twenty-one (21) calendar days of County's request.

- 24.1.3.5** The County shall have the right (but shall have no obligation) to assume and/or assign to a general contractor or construction manager or other third party who is qualified and has sufficient resources to complete the Work, the rights of the Contractor under its subcontracts with any or all Subcontractors. In the event of an assumption or assignment by the County, no Subcontractor shall have any claim against the County or third party for Work performed by Subcontractor or other matters arising prior to termination of the Contract. The County or any third party, as the case may be, shall be liable only for obligations to the Subcontractor arising after assumption or assignment. Should the County so elect, the Contractor shall execute and deliver all documents and take all steps, including the legal assignment of its contractual rights, as the County may require, for the purpose of fully vesting in the County the rights and benefits of it as a Subcontractor under Subcontracts or other obligations or commitments. All payments due the Contractor hereunder shall be subject to a right of offset by the County for expenses and damages suffered by the County as a result of any default, acts, or omissions of the Contractor. Contractor must include this assignment provision in all of its contracts with its Subcontractors.
- 24.1.3.6** The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to County.

24.2 Termination of Contractor for Convenience

24.2.1 County in its sole discretion may terminate the Contract upon three (3) calendar days written notice to the Contractor. Under a termination for convenience, the County retains the right to all the options available to the County if there is a termination for cause. In case of a termination for convenience, the Contractor shall have no claims against the County except:

- 24.2.1.1** The actual cost of labor, materials, and services performed that is unpaid and can be properly documented through timesheets, invoices, receipts, or otherwise, and
- 24.2.1.2** Five percent (5%) of the total cost of work performed as of the date of termination, or five percent (5%) of the value of the Work yet to be performed, whichever is less. This five percent (5%) amount shall be full compensation for all Contractor's and its Subcontractors' mobilization and demobilization costs and any anticipated lost profits resulting from termination of the Contractor for convenience.

24.3 Emergency Termination of Public Contracts Act of 1949

24.3.1 This Contract is subject to termination as provided by §§4410 and 4411 of the Government Code of the State of California, being a portion of the Emergency Termination of Public Contracts Act of 1949.

24.3.1.1 § 4410 of the Government Code states:

In the event a national emergency occurs, and public work, being performed by

contract, is stopped, directly or indirectly, because of the freezing or diversion of materials, equipment or labor, as the result of an order or a proclamation of the President of the United States, or of an order of any federal authority, and the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the work, then the public agency and the contractor may, by written agreement, terminate said contract.

24.3.1.2 § 4411 of the Government Code states, in part:

Such an agreement shall include the terms and conditions of the termination of the contract and provision for the payment of compensation or money, if any, which either party shall pay to the other or any other person, under the facts and circumstances in the case.

24.3.1.3 Compensation to the Contractor shall be determined at the sole discretion of County on the basis of the reasonable value of the Work done, including preparatory work. As an exception to the foregoing and at the County's discretion, in the case of any fully completed separate item or portion of the Work for which there is a separate previously submitted unit price or item on the accepted schedule of values, that price shall control.

24.3.1.4 The County, at its sole discretion, may adopt the Contract Price as the reasonable value of the work done or any portion thereof.

25. CLAIMS AND DISPUTES

25.1 Performance During Claim Process

The Contractor shall continue to perform its Work under the Contract and shall not cause a delay in the Work during any dispute, claims definition, negotiation, mediation, or arbitration proceeding, except by written agreement by the County.

25.2 Definition of Claim

25.2.1 For purposes of this section, a "Claim" means a separate demand by the Contractor for:

25.2.1.1 A time extension,

25.2.1.2 Payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the Contract and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or

25.2.1.3 Payment of money that the County disputes is owing.

25.3 Claim Presentations

25.3.1 The attention of the Contractor is drawn to Government Code § 12650, et seq. regarding penalties for false claims.

25.3.2 Contractor shall file with the County any written Claim, including the documents necessary to substantiate it, on or before the day of final payment on the Contract.

25.3.3 Contractor shall bind all its Subcontractors, material persons, and suppliers to the provisions of this section regarding mediation and arbitration and will hold the County harmless against disputes and claims by Subcontractors, material persons, and suppliers.

25.4 Claim Resolution

25.4.1 In the event of a dispute between the parties as to performance of the Work, the interpretation of this Contract, or payment or nonpayment for Work performed or not performed, the parties shall attempt to resolve the dispute by those procedures set forth in Public Contract Code § 9204, if applicable. Pending resolution of the dispute, Contractor agrees it will neither rescind the Contract nor stop the progress of the Work but will allow determination by a court of the State of California having competent jurisdiction of the dispute, after the Project has been completed, and not before.

25.4.2 For all Claims which arise between the Contractor and the County, the procedure set forth in Public Contract Code § 9204 shall apply:

25.4.2.1 The County shall respond in writing within forty-five (45) days of receipt of the Claim identifying what portion of the Claim is disputed and what portion is undisputed; provided however, that if County fails to timely respond then the claim is deemed rejected in its entirety.

25.4.2.1.1 Upon receipt of a Claim, County, and Contractor may by mutual agreement, extend the time period for County to respond.

25.4.2.1.2 Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after the County issues its written response to the Claim.

25.4.3 If Contractor disputes County's written response, or if County fails to respond to a Claim issued pursuant to this § 25.4 within the time prescribed, Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute.

25.4.3.1 Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, County shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute.

25.4.4 Within ten (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 County shall provide Contractor a written statement identifying the portion of the Claim that remains in dispute and the portion that is undisputed.

25.4.4.1 Any payment due on an undisputed portion of the Claim shall be processed and made within sixty (60) days after the County issues its written statement.

25.4.5 Any disputed portion of the Claim, as identified by the statement referenced in § 25.4.4 shall be submitted to nonbinding mediation, with the County and Contractor sharing the associated costs equally.

25.4.5.1 County and Contractor shall mutually agree to a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing.

25.4.5.2 If County and Contractor cannot agree to 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.

25.4.5.3 County and Contractor shall each bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator.

25.4.5.4 If mediation is unsuccessful the parts of the claim remaining in dispute shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with § 1141.10) of the Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding § 1141.11 of that code. The Civil Discovery Act of 1986, (Article 3 (commencing with § 2016) of Chapter 3 of Title 3 of part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.

25.4.6 The County shall not fail to pay money as to any portion of a claim which is undisputed except as otherwise provided in the Contract Documents. Unpaid claim amounts not paid in a timely manner will bear interest at seven percent (7%) per annum. In any suit filed pursuant to this section, the County shall pay interest at the legal rate on any arbitration award or judgment. Interest shall begin to accrue on the date the suit is filed in a court of law.

25.4.7 If a Subcontractor or lower-tier subcontractor lacks legal standing to assert a Claim against County because privity of contract does not exist, Contractor may present County 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 that of a lower-tier Subcontractor, that Contractor present a Claim for work which was performed by Subcontractor, or by a lower-tier Subcontractor on behalf of Subcontractor. Subcontractor requesting that the claim be presented to County must furnish reasonable documentation to support the Claim. Within forty-five (45) days of receipt of this written request, Contractor must notify Subcontractor in writing as to whether Contractor presented the Claim to County, and, if Contractor did not present the Claim, provide Subcontractor with a written statement of the reasons for not having done so.

26. LABOR, WAGE & HOUR, APPRENTICE, AND RELATED PROVISIONS

26.1 Wage Rates, Travel, and Subsistence –

26.1.1 Pursuant to the provisions of Article 2 (commencing with § 1770), chapter 1, part 7, division 2, of the Labor Code of California, the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public work is to be performed for each craft, classification or type of worker needed to execute this Contract is on file at the County’s principal office, and copies will be made available to any interested party on request. Contractor shall obtain and post a copy of these wage rates at the job site.

26.1.2 Holiday and overtime work, when permitted by law, shall be paid for at a rate of at least one and one-half times the above-specified rate of per diem wages unless otherwise specified. The holidays upon which those rates shall be paid need not be specified by the County but shall be all holidays recognized in the applicable collective bargaining agreement. If the prevailing rate is not based on a collectively bargained rate, the holidays upon which the prevailing rate shall be paid shall be as provided in § 6700 of the Government Code.

26.1.3 Contractor shall pay and shall cause to be paid each worker engaged in Work on the Project not less than the general prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations (“DIR”) (“Director”), regardless of any contractual relationship which may be alleged to exist between Contractor or any Subcontractor and such workers.

26.1.4 Contractor shall pay and shall cause to be paid to each worker needed to execute the Work on the Project travel and subsistence payments, as such travel and subsistence payments are defined in the applicable Collective Bargaining Agreements filed with the Department of Industrial Relations in accordance with Labor Code § 1773 et seq.

26.1.5 If during the period this bid is required to remain open, the Director determines that there has been a change in any prevailing rate of per diem wages in the locality in which the Work under the Contract is to be performed, such change shall not alter the wage rates in the Notice to Bidders or the Contract subsequently awarded.

26.1.6 Pursuant to Labor Code § 1775, Contractor shall, as a penalty to County, forfeit the statutory amount for each calendar day, or portion thereof, for each worker paid less than the prevailing rates, determined by the County and/or the Director, for the work or craft in which that worker is employed for any public work done under Contract by Contractor or by any Subcontractor under it. The difference between such prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by Contractor.

26.1.7 Any worker employed to perform Work on the Project, which Work is not covered by any classification listed in the general prevailing wage rate of per diem wages determined by the Director, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to Work to be performed by him, and such minimum wage rate shall be retroactive to time of initial employment of such person in such classification.

26.1.8 Pursuant to Labor Code § 1773.1, per diem wages, are deemed to include employer payments for health and welfare, pension, vacation, travel time, subsistence pay, and apprenticeship or other training programs authorized by § 3093, and similar purposes.

26.1.9 Contractor shall post at appropriate conspicuous points on the Site of Project, a schedule showing all determined minimum wage rates and all authorized deductions if any, from unpaid wages, actually earned. In addition, Contractor shall post a sign-in log for all workers and visitors to the Site, a list of all subcontractors of any tier on the Site, and the required Equal Employment Opportunity poster(s).

26.1.10 Contractor stipulates that it shall comply with all requirements of PROJECT STABILIZATION/COMMUNITY BENEFITS AGREEMENT (**For projects over \$1M**) of the COUNTY OF ALAMEDA, and shall pay to persons performing labor in and about the Work provided for in the Contract an amount equal to or more than the following:

26.1.10.1 Wage rate and fringe benefit payments and classification for that person's corresponding labor classification as required by the Department of Industrial Relations;

26.1.10.2 Wage rate and fringe benefit payments and classification for that person's corresponding labor classification as required under the PROJECT STABILIZATION/COMMUNITY BENEFITS AGREEMENT of the COUNTY OF ALAMEDA (**For projects over \$1M**) and California Labor Code.

26.1.11 If there are conflicts between the Wage rate and fringe benefit payments and classification between the Department of Industrial Relations and the PROJECT STABILIZATION/COMMUNITY BENEFITS AGREEMENT of the COUNTY OF ALAMEDA (**For projects over \$1M**), Contractor shall pay the higher wage rate and fringe benefits.

26.2 Hours of Work

26.2.1 As provided in Article 3 (commencing with § 1810), chapter 1, part 7, division 2, of the Labor Code, eight (8) hours of labor shall constitute a legal days work. The time of service of any worker employed at any time by Contractor or by any Subcontractor on any subcontract under this Contract upon the Work or upon any part of the Work contemplated by this Contract shall be limited and restricted by Contractor to eight (8) hours per day, and forty (40) hours during any one week, except as hereinafter provided. Notwithstanding the provisions hereinabove set forth, Work performed by employees of Contractor in excess of eight (8) hours per day and forty (40) hours during any one week, shall be permitted upon this public work upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half times the basic rate of pay.

26.2.2 Contractor shall keep and shall cause each Subcontractor to keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable hours to the inspection of County and to the Division of Labor Standards

Enforcement of the DIR.

26.2.3 Pursuant to Labor Code § 1813, Contractor shall as a penalty to the County forfeit the statutory amount for each worker employed in the execution of this Contract by Contractor or by any Subcontractor for each calendar day during which such worker is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provisions of Article 3 (commencing with § 1810), chapter 1, part 7, division 2, of the Labor Code.

26.2.4 Any Work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to the County.

26.3 Payroll Records

26.3.1 County will use the Alameda County Contract Compliance System, including the Elation Systems, Inc. program, to monitor contract and labor compliance. Contractor shall use the Compliance System to meet County's requirements and shall participate in training as directed by County to become and remain competent in the use of the Compliance System.

26.3.2 Pursuant to the provisions of § 1776 of the Labor Code, notice is hereby given that Contractor shall prepare and provide to the County and shall cause each Subcontractor performing any portion of the Work under this Contract to prepare and provide to the County an accurate and certified payroll record ("CPR"), showing the name, address, social security number, work classification, straight time, and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by the Contractor and/or each Subcontractor in connection with the Work.

26.3.3 The CPRs shall be certified and shall be provided to the County on a weekly basis. The CPRs from the Contractor and each Subcontractor for each week shall be provided on or before Wednesday of the week following the week covered by the CPRs. County shall not make any payment to Contractor until:

26.3.3.1 Contractor and/or its Subcontractors provide CPRs acceptable to the County, and

26.3.3.2 The County is given sufficient time to review and/or audit the CPRs to determine their acceptability. Any delay in Contractor and/or its Subcontractors providing CPRs to the County in a timely manner will directly delay the County's review and/or audit of the CPRs and Contractor's payment.

26.3.4 All CPRs shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:

26.3.4.1 A certified copy of an employee's CPR shall be made available for inspection or furnished to the employee or the employee's authorized representative on request.

26.3.4.2 CPRs shall be made available for inspection or furnished upon request to a representative of County, Division of Labor Standards Enforcement, Division of Apprenticeship Standards, and/or the

Department of Industrial Relations.

26.3.4.3 CPRs shall be made available upon request by the public for inspection or copying; provided, however, that a request by the public shall be made through either the County, Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested CPRs have not been provided, the requesting party shall, prior to being provided the records, reimburse the costs of preparation by Contractor, Subcontractors, and the entity through which the request was made. The public shall not be given access to the records at the principal office of Contractor.

26.3.5 The form of certification for the CPRs shall be as follows:

I, (Name-Print), the undersigned, am the (Position in business) with the authority to act for and on behalf of (Name of business and/or Contractor), certify under penalty of perjury that the records or copies thereof submitted and consisting of (Description, number of pages) are the originals or true, full, and correct copies of the originals which depict the payroll record(s) of actual disbursements by way of cash, check, or whatever form to the individual or individual named, and (b) we have complied with the requirements of §§1771, 1811, and 1815 for any work performed by our employees on the Project.

Date: _____ Signature: _____

(Title 8 § 16401 of the California Code of Regulations)

26.3.6 Each Contractor shall file a certified copy of the CPRs with the entity that requested the records within ten (10) days after receipt of a written request.

26.3.7 Any copy of records made available for inspection as copying and furnished upon request to the public or any public agency by County, Division of Apprenticeship Standards, or Division of Labor Standards Enforcement shall be marked or obliterated in such a manner as to prevent disclosure of an individual's name, address, and social security number. The name and address of Contractor awarded Contract or performing Contract shall not be marked or obliterated.

26.3.8 Contractor shall inform County of the location of the records enumerated hereunder, including the street address, city, and county, and shall, within five (5) working days, provide a notice of change of location and address.

26.3.9 In the event of noncompliance with the requirements of this section, Contractor shall have ten (10) days in which to comply subsequent to receipt of written notice specifying in what respects Contractor must comply with this section. Should noncompliance still be evident after the ten (10) day period, Contractor shall, as a penalty to County, forfeit twenty-five dollars (\$25) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of Division of Apprenticeship Standards or Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due.

26.3.10 It shall be the responsibility of Contractor to ensure compliance with

the provisions of Labor Code § 1776.

26.4 Apprentices

26.4.1 Contractor acknowledges and agrees that, if this Contract involves a dollar amount greater than or a number of working days greater than that specified in Labor Code § 1777.5, then this Contract is governed by the provisions of Labor Code § 1777.5. It shall be the responsibility of Contractor to ensure compliance with this Article and with Labor Code § 1777.5 for all apprenticeship occupations.

26.4.2 Apprentices of any crafts or trades may be employed and, when required by Labor Code § 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.

26.4.3 Every such apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which the apprentice is employed and shall be employed only in the work of the craft or trade to which the apprentice is registered.

26.4.4 Only apprentices, as defined in § 3077 of the Labor Code, who are in training under apprenticeship standards and written apprentice agreements under Chapter 4 (commencing at § 3070), Division 3, of the Labor Code, are eligible to be employed. The employment and training of each apprentice shall be in accordance with the provisions of the apprenticeship standards and apprentice agreements under which the apprentice is training.

26.4.5 Pursuant to Labor Code § 1777.5, if that section applies to this Contract, Contractor and any Subcontractors employing workers in any apprenticeable craft or trade in performing any Work under this Contract shall apply to the applicable joint apprenticeship committee for a certificate approving the Contractor or Subcontractor under the applicable apprenticeship standards and fixing the ratio of apprentices to journeymen employed in performing the Work.

26.4.6 Pursuant to Labor Code § 1777.5, if that section applies to this Contract, Contractor and any Subcontractor may be required to make contributions to the apprenticeship program.

26.4.7 If Contractor or Subcontractor willfully fails to comply with Labor Code § 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:

26.4.7.1 Be denied the right to bid on any subsequent project for one (1) year from the date of such determination;

26.4.7.2 Forfeit as a penalty to County the full amount as stated in Labor Code § 1777.7. Interpretation and enforcement of these provisions shall be in accordance with the rules and procedures of the California Apprenticeship Council and under the authority of the Chief of the Division of Apprenticeship Standards.

26.4.8 Contractor and all Subcontractors shall comply with Labor Code § 3073.9, which section forbids certain discriminatory practices in the employment of apprentices.

26.4.9 Contractor shall become fully acquainted with the law regarding apprentices prior to commencement of the Work. Special attention is directed to Article 2 (commencing with §3075) of Division 4, Chapter 4 of the Labor Code, and §§1777.5, 1777.6, and 1777.7 of the Labor Code, and title 8, California Code of Regulations, §200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 1515 Clay St, 19th floor, Ste 1902, Oakland, California 94612, (415) 703-4920.

26.5 Non-Discrimination

26.5.1 Contractor agrees not to discriminate in its recruiting, hiring, promotion, demotion, or termination practices on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or veteran or military status in the performance of this Contract and to comply with the provisions of the California Fair Employment and Housing Act as set forth in part 2.8 of Division 3 of the California Government Code, commencing at §12900; the Federal Civil Rights Act of 1964, as set forth in Public Law 88-352, and all amendments thereto; Executive Order 11246, and all administrative rules and regulations found to be applicable to Contractor and Subcontractor.

26.5.2 [Special requirements for Federally Assisted Construction Contracts: Intentionally omitted.

26.6 Labor Medical Services and First Aid

Contractor shall maintain emergency medical services and first aid treatment for Contractor's workers on the Project which complies with the Federal Occupational Safety and Health Act of 1970 (29 U.S.C. § 651 et seq.), the California Occupational Safety and Health Act of 1973, and applicable regulations including (8 Cal. Code of Regs., §. 3400).

27. MISCELLANEOUS

27.1 Assignment of Antitrust Actions

27.1.1 §7103.5(b) of the Public Contract Code states:

In entering into a public works contract or subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under § 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with § 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

27.1.2 § 4552 of the Government Code states:

In submitting a bid to a public purchasing body, the bidder offers and agrees that if the bid is accepted, it will assign to the purchasing body all rights, title, and interest in and to all causes of action it may have under § 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with § 16700) of Part 2 of Division

7 of the Business and Professions Code), arising from purchases of goods, materials, or services by the bidder for sale to the purchasing body pursuant to the bid. Such assignment shall be made and become effective at the time the purchasing body tenders final payment to the bidder.

27.1.3 § 4553 of the Government Code states:

If an awarding body or public purchasing body receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under this chapter, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the public body any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the public body as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

27.1.4 § 4554 of the Government Code states:

Upon demand in writing by the assignor, the assignee shall, within one year from such demand, reassign the cause of action assigned under this part if the assignor has been or may have been injured by the violation of law for which the cause of action arose and (a) the assignee has not been injured thereby, or (b) the assignee declines to file a court action for the cause of action.

27.1.5 Under Public Contract Code §7103.5 and Government Code §4550, the “public purchasing body” is the County and “bidder” is Contractor.

27.2 Excise Taxes

If, under Federal Excise Tax Law, any transaction hereunder constitutes a sale on which a Federal Excise Tax is imposed, and the sale is exempt from such Federal Excise Tax because it is a sale to a State or Local Government for its exclusive use, County, upon request, will execute documents necessary to show (a) that County is a political subdivision of the State for the purposes of such exemption, and (b) that the sale is for the exclusive use of County. No Federal Excise Tax for such materials shall be included in any Contract Price.

27.3 Taxes

Contract Price shall include all applicable sales taxes or other taxes that may be due in accordance with the California Revenue and Taxation Code; 18 California Code of Regulations §1521, or any other applicable tax code.

27.4 Shipments

All shipments must be F.O.B. destination to Site or sites, as indicated in the Contract Documents. There must be no charge for containers, packing, unpacking, drayage or insurance. The total Contract Price shall be all inclusive (including sales tax), and no additional costs of any type will be considered.

END OF DOCUMENT

SPECIAL CONDITIONS

1. Mitigation Measures

Contractor shall comply with all applicable mitigation measures, if any, adopted by any public agency with respect to this Project pursuant to the California Environmental Quality Act. (Public Resources Code section 21000 et. seq.)

2. Substitution for Specified Items

2.1. Requests for substitutions prior to award of the Contract shall be made within the time period indicated in the Instructions to Bidders (Document 00 21 13, paragraph 20). Requests for substitutions after award of the Contract shall be made within **THIRTY-FIVE (35)** days of the date of the Notice of Award.

2.2. Whenever in the Specifications any materials, process, or article is indicated or specified by grade, patent, or proprietary name, or by name of manufacturer, that Specification shall be deemed to be followed by the words “or equal.” Contractor may, unless otherwise stated, offer any material, process, or article that shall be substantially equal or better in every respect to that so indicated or specified.

2.2.1. If the material, process, or article offered by Contractor is not, in the opinion of the County, substantially equal or better in every respect to that specified, then Contractor shall furnish the material, process, or article specified in the Specifications without any additional compensation or change order.

2.2.2. This provision shall not be applicable with respect to any material, product, thing or service for which County made findings and gave notice in accordance with Public Contract Code § 3400(b) and Contractor shall not be entitled to request a substitution with respect to those materials, products or services.

2.3. A request for a substitution shall be in writing and shall include:

2.3.1. All variations of the proposed substitute from the material specified including, but not limited to, principles of operation, materials, or construction finish, thickness or gauge of materials, dimensions, weight, and tolerances;

2.3.2. Available maintenance, repair or replacement services;

2.3.3. Increases or decreases in operating, maintenance, repair, replacement, and

spare parts costs;

- 2.3.4. Whether or not acceptance of the substitute will require other changes in the Work (or in work performed by the County or others under Contract with the County); and
 - 2.3.5. The time impact on any part of the Work resulting directly or indirectly from acceptance of the proposed substitute.
- 2.4. No substitutions shall be made until approved, in writing, by the County. The burden of proof as to equality of any material, process, or article shall rest with Contractor. The Contractor warrants that if substitutes are approved:
- 2.4.1. The proposed substitute is equal or superior in all respects to that specified, and that such proposed substitute is suitable and fit for the intended purpose and will perform adequately the function and achieve the results called for by the general design and the Contract Documents;
 - 2.4.2. The Contractor provides the same warranties and guarantees for the substitute that would be provided for that specified;
 - 2.4.3. The Contractor shall be fully responsible for the installation of the substitute and any changes in the Work required, either directly or indirectly, because of the acceptance of such substitute, with no increase in Contract Price or Contract Time. Incidental changes or extra component parts required to accommodate the substitute will be made by the Contractor without a change in the Contract Price or Contract Time;
 - 2.4.4. The Contractor shall be responsible for any re-design costs occasioned by County's acceptance and/or approval of any substitute; and
 - 2.4.5. The Contractor shall, in the event that a substitute is less costly than that specified, credit the County with one hundred percent (100%) of the net difference between the substitute and the originally specified material. In this event, the Contractor agrees to execute a deductive Change Order to reflect that credit.
- 2.5. In the event Contractor furnishes a material, process, or article more expensive than that specified, the difference in the cost of that material, process, or article so furnished shall be borne by Contractor.
- 2.6. In no event shall the County be liable for any increase in Contract Price or Contract Time due to any claimed delay in the evaluation of any proposed substitute or in the acceptance or rejection of any proposed substitute.

3. Weather Days

- 3.1 Delays due to adverse weather conditions will only be permitted in compliance with the provisions in the General Conditions and only if the number of days of adverse weather exceeds the following parameters and only if Contractor can verify that adverse weather caused delays exceeded the following number of days:

January	11	July	0
February	10	August	0
March	10	September	1
April	6	October	4
May	3	November	7
June	1	December	10

4. **Insurance Policy Limits.** All of Contractor’s insurance shall be with insurance companies with an A.M. Best rating of no less than A: XI.

- 4.1 The limits of insurance shall not be less than:

Commercial General Liability	Each Occurrence	\$2,000,000
	General Aggregate	\$2,000,000
	Product Liability and Completed Operations	\$1,000,000
Automobile Liability – Any Auto	Combined Single Limit	\$2,000,000
Excess Liability		\$4,000,000
Workers Compensation		Statutory limits pursuant to state law
Employers’ Liability		\$1,000,000
Builders Risk (Course of Construction)		Issued for the value of the Contract

5. **Permits, Certificates, Licenses, Fees, Approval**

- 5.1 **Payment for Permits, Certificates, Licenses, and Fees.** As required in the General Conditions (Document 00 72 13), the Contractor shall secure and pay for all permits, licenses and certificates necessary for the prosecution of the Work.

6. **Work Restrictions**

- 6.1 Hours of Work: The Standard work schedule is an 8-hour day which may be 8:00

a.m. to 5:30 p.m. Monday through Friday. Contractor shall inform the County of Contractor's preferred work schedule in writing prior to commencement of work.

- 6.2 Access to Site during construction shall be through the First Floor.
- 6.3 Phasing and Scheduling: Contractor shall coordinate with the County to ensure a reasonable schedule that accommodates the Alameda Social Services Agency.
- 6.4 On site car parking for contractor team vehicles is not available or budgeted for.

END OF DOCUMENT

HAZARDOUS MATERIALS PROCEDURES & REQUIREMENTS

1. Summary

This document includes information applicable to hazardous materials and hazard waste abatement.

2. Notice of Hazardous Waste or Materials Conditions

- 2.1. Contractor shall give notice in writing, including by e-mail, to the County, the Construction Manager, and the Architect promptly, before any of the following conditions are disturbed, and in no event later than twenty-four (24) hours after first observance of any:
 - 2.1.1. Material that Contractor believes may be material that is hazardous waste or hazardous material, as defined in section 25117 or 25260 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law; or
 - 2.1.2. Other material that may present a substantial danger to persons or property exposed thereto in connection with Work at the site.
- 2.2. Contractor's written notice shall indicate whether the hazardous waste or material was shown or indicated in the Contract Documents to be within the scope of Work, and whether the materials were brought to the site by Contractor, its Subcontractors, suppliers, or anyone else for whom Contractor is responsible. As used in this section the term "hazardous materials" shall include, without limitation, asbestos, lead, mercury, Polychlorinated biphenyl (PCB), petroleum and related hydrocarbons, and radioactive material.
- 2.3. In response to Contractor's written notice, the County shall investigate the identified conditions.
- 2.4. If the County determines that conditions do not involve hazardous materials or that no change in terms of Contract is justified, the County shall so notify Contractor in writing, stating reasons for its determination. If the County and Contractor cannot agree on whether conditions justify an adjustment in Contract Price or Contract Times, or on the extent of any adjustment, Contractor shall proceed with the Work as directed by the County.
- 2.5. If after receipt of notice from the County, Contractor does not agree to resume Work based on a reasonable belief it is unsafe or does not agree to resume Work under special conditions, then County may order such portion of Work that is in connection with such hazardous condition or such affected area to be deleted from the Work, or performed by others, or County may invoke its rights to terminate the Contract in

whole or in part.

County will determine entitlement to or the amount or extent of an adjustment, if any, in Contract Price or Contract Times as a result of deleting such portion of Work or performing the Work by others.

- 2.6. If Contractor stops Work in connection with any hazardous condition and in any area affected thereby, Contractor shall immediately redeploy its workers, equipment, and materials, as necessary, to other portions of the Work to minimize delay and disruption.

3. Additional Warranties and Representations

- 3.1. Contractor represents and warrants that it, its employees, and its subcontractors and their employees, shall at all times have the required levels of familiarity with the Site and the Work, training, and ability to comply fully with all applicable law and contract requirements for safe and expeditious performance of the Work, including whatever training is or may be required regarding the activities to be performed (including, but not limited to, all training required to address adequately the actual or potential dangers of Contract performance).
- 3.2. Contractor represents and warrants that it, its employees, and its subcontractors and their employees, shall at all times have and maintain in good standing any and all certifications and licenses required by applicable federal, state, and other governmental and quasi-governmental requirements applicable to the Work.
- 3.3. Contractor represents and warrants that it has studied carefully all requirements of the Specifications regarding procedures for demolition, hazardous waste abatement, or safety practices, specified in the Contract, and prior to submitting its bid, has either (a) verified to its satisfaction that the specified procedures are adequate and sufficient to achieve the results intended by the Contract Documents, or (b) by way of approved "or equal" request or request for clarification and written Addenda, secured changes to the specified procedures sufficient to achieve the results intended by the Contract Documents. Contractor accepts the risk that any specified procedure will result in a completed Project in full compliance with the Contract Documents.

4. Monitoring and Testing

- 4.1. County reserves the right, in its sole discretion, to conduct air monitoring, earth monitoring, Work monitoring, and any other tests (in addition to testing required under the agreement or applicable law), to monitor Contract requirements of safe and statutorily compliant work methods and (where applicable) safe re- entry level air standards under state and federal law upon completion of the job, and compliance of the work with periodic and final inspection by public and quasi-public entities having jurisdiction.

- 4.2. Contractor acknowledges that County has the right to perform, or cause to be

performed, various activities and tests including, but not limited to, pre- abatement, during abatement, and post-abatement air monitoring, that County shall have no obligation to perform said activities and tests, and that a portion of said activities and tests may take place prior to the completion of the Work by Contractor. In the event County elects to perform these activities and tests, Contractor shall afford County ample access to the Site and all areas of the Work as may be necessary for the performance of these activities and tests. Contractor will include the potential impact of these activities or tests by County in the Contract Price and the Scheduled Completion Date.

- 4.3. Notwithstanding County's rights granted by this paragraph, Contractor may retain its own industrial hygiene consultant at Contractor's own expense and may collect samples and may perform tests including, but not limited to, pre-abatement, during abatement, and post-abatement personal air monitoring, and County reserves the right to request documentation of all such activities and tests performed by Contractor relating to the Work and Contractor shall immediately provide that documentation upon request.

5. Compliance with Laws

- 5.1. Contractor shall perform safe, expeditious, and orderly work in accordance with the best practices and the highest standards in the hazardous waste abatement, removal, and disposal industry, the applicable law, and the Contract Documents, including, but not limited to, all responsibilities relating to the preparation and return of waste shipment records, all requirements of the law, delivering of all requisite notices, and obtaining all necessary governmental and quasi- governmental approvals.
- 5.2. Contractor represents that it is familiar with and shall comply with all laws applicable to the Work or completed Work including, but not limited to, all federal, state, and local laws, statutes, standards, rules, regulations, and ordinances applicable to the Work relating to:
 - 5.2.1. The protection of the public health, welfare and environment;
 - 5.2.2. Storage, handling, or use of asbestos, PCB, lead, petroleum-based products or other hazardous materials;
 - 5.2.3. The generation, processing, treatment, storage, transport, disposal, destruction, or other management of asbestos, PCB, lead, petroleum, or hazardous waste materials or other waste materials of any kind; and
 - 5.2.4. The protection of environmentally sensitive areas such as wetlands and coastal areas.

6. Disposal

- 6.1. Contractor has the sole responsibility for determining current waste storage, handling, transportation, and disposal regulations for the job Site and for each waste

disposal facility. Contractor must comply fully at its sole cost and expense with these regulations and any applicable law. County may, but is not obligated to, require submittals with this information for it to review consistent with the Contract Documents.

- 6.2. Contractor shall develop and implement a system acceptable to County to track hazardous waste from the Site to disposal, including appropriate "Hazardous Waste Manifests" on the EPA form, so that County may track the volume of waste it put in each landfill and receive from each landfill a certificate of receipt.
- 6.3. Contractor shall provide County with the name and address of each waste disposal facility prior to any disposal, and County shall have the express right to reject any proposed disposal facility. Contractor shall not use any disposal facility to which County has objected. Contractor shall document actual disposal or destruction of waste at a designated facility by completing a disposal certificate or certificate of destruction forwarding the original to the County.

7. Permits

- 7.1. Before performing any of the Work, and at such other times as may be required by applicable law, Contractor shall deliver all requisite notices and obtain the approval of all governmental and quasi-governmental authorities having jurisdiction over the Work. Contractor shall submit evidence satisfactory to County that it and any disposal facility:
 - 7.1.1. have obtained all required permits, approvals, and the like in a timely manner both prior to commencement of the Work and thereafter as and when required by applicable law, and
 - 7.1.2. are in compliance with all such permits, approvals and the regulations.

For example, before commencing any work in connection with the Work involving asbestos-containing materials, or PCBs, or other hazardous materials subject to regulation, Contractor agrees to provide the required notice of intent to renovate or demolish to the appropriate state or federal agency having jurisdiction, by certified mail, return receipt requested, or by some other method of transmittal for which a return receipt is obtained, and to send a copy of that notice to County. Contractor shall not conduct any Work involving asbestos- containing materials or PCBs unless Contractor has first confirmed that the appropriate agency having jurisdiction is in receipt of the required notification. All permits, licenses, and bonds that are required by governmental or quasi-governmental authorities, and all fees, deposits, tap fees, offsite easements, and asbestos and PCB disposal facilities expenses necessary for the prosecution of the Work, shall be procured and paid for by Contractor. Contractor shall give all notices and comply with all applicable laws bearing on the conduct of the Work as drawn and specified. If Contractor observes or reasonably should have observed that Plans and

Specifications and other Contract Documents are at variance therewith, it shall be responsible for promptly notifying County in writing, including by e-mail, of such fact. If Contractor performs any Work contrary to applicable laws, it shall bear all costs arising therefrom.

- 7.2. In the case of any permits or notices held in County's name or of necessity to be made in County's name, County shall cooperate with Contractor in securing the permit or giving the notice, but the Contractor shall prepare for County review and execution upon approval, all necessary applications, notices, and other materials.

8. Indemnification

- 8.1. To the extent permitted by law, the indemnities and limitations of liability expressed throughout the Contract Documents apply with equal force and effect to any claims or liabilities imposed or existing by virtue of the removal, abatement, and disposal of hazardous waste. This includes, but is not limited to, liabilities connected to the selection and use of a waste disposal facility, personal injury, property damage, loss of use of property, damage to the environment or natural resources, or "disposal" and "release" of materials associated with the Work (as defined in 42 U.S.C. § 9601 et seq.).

9. Termination

- 9.1. County shall have an absolute right to terminate for default immediately without notice and without an opportunity to cure should Contractor knowingly or recklessly commit a material breach of the terms of the Contract Documents, or any applicable law, on any matter involving the exposure of persons or property to hazardous waste. However, if the breach of contract exposing persons or property to hazardous waste is due solely to an ordinary, unintentional, and non-reckless failure to exercise reasonable care, then the procedures for termination for cause shall apply without modification.

END OF DOCUMENT

SUMMARY OF WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All contract documents must be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions.
- B. Special Conditions.
- C. Construction Waste Management Document 01 74 19.

1.02 SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of this Contract may consist of the following:

1.03 CONTRACTS

- A. Perform the Work under a single, fixed-price Contract.
- B. Any bid item may be deleted in total or in part prior to or after award of Contract without compensation in any form or adjustment of other bid items or prices.

1.04 WORK BY OTHERS

- A. Work on the Project that will be performed and completed prior to the start of the Work of this Contract:
 - (1) None.
- B. Other Construction Projects shall be ongoing concurrently onsite that are not part of this Program. Coordination with the other work onsite is required. Work on the Project that will be performed by others concurrent with the Work of this Contract:

1.05 CODES, REGULATIONS, AND STANDARDS

- A. The codes, regulations, and standards adopted by the city, state, and federal agencies having jurisdiction shall govern the minimum requirements for this project. Where codes, regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the County and the Architect.

- B. Codes, regulations, and standards shall be as published effective as of date of bid opening, unless otherwise specified or indicated.

1.06 PROJECT RECORD DOCUMENTS:

- A. Contractor shall maintain on Site one set of the following record documents; Contractor shall record actual revisions to the Work:
 - (1) Contract Drawings.
 - (2) Specifications.
 - (3) Addenda.
 - (4) Change Orders and other modifications to the Contract.
 - (5) Reviewed shop drawings, product data, and samples.
 - (6) Field test records.
 - (7) Inspection certificates.
 - (8) Manufacturer's certificates.
- B. Contractor shall store Record Documents separate from documents used for construction. Provide files, racks, and secure storage for Record Documents and samples.
- C. Contractor shall record information concurrent with construction progress.
- D. Specifications: Contractor shall legibly mark and record at each product section of the Specifications the description of the actual product(s) installed, including the following:
 - (1) Manufacturer's name and product model and number.
 - (2) Product substitutions or alternates utilized.
 - (3) Changes made by Addenda and Change Orders and written directives.

1.07 EXAMINATION OF EXISTING CONDITIONS

- A. The Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site or of the streets or roads approaching the Site.

- B. Prior to commencement of Work, Contractor shall survey the Site and existing buildings and improvements to observe existing damage and defects such as cracks, sags, broken, missing or damaged glazing, other building elements and Site improvements, and other damage.
- C. Should Contractor observe cracks, sags, and other damage to and defects of the Site and adjacent buildings, paving, and other items not indicated in the Contract Documents, Contractor shall immediately report same to the County and the Architect.

1.08 CONTRACTOR'S USE OF PREMISES

- A. If unoccupied and only with County's prior written approval, Contractor may use the building(s) at the Project Site without limitation for its operations, storage, and office facilities for the performance of the Work. If the County chooses to beneficially occupy any building(s), Contractor must obtain the County's written approval for Contractor's use of spaces and types of operations to be performed within the building(s) while so occupied. Contractor's access to the building(s) shall be limited to the areas indicated.
- B. If the space at the Project Site is not sufficient for Contractor's operations, storage, office facilities and/or parking, Contractor shall arrange and pay for any additional facilities needed by Contractor.
- C. Contractor shall not interfere with use of or access to occupied portions of the building(s) or adjacent property.
- D. Contractor shall maintain corridors, stairs, halls, and other exit-ways of the building clear and free of debris and obstructions at all times.
- E. No one other than those directly involved in the demolition and construction, or specifically designated by the County or the Architect shall be permitted in the areas of work during demolition and construction activities.
- F. Contractor shall provide secure storage for the storage of tools and materials. Coordination with the facility manager will need to be made as space is limited and may be required to be stored within the construction zones.

1.09 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings show above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Contractor shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of

repair shall be at the Contractor's expense and made to the County's satisfaction.

- B. Contractor shall be alert to the possibility of the existence of additional structures and utilities. If Contractor encounters additional structures and utilities, Contractor will immediately report to the County for disposition of same as indicated in the General Conditions.
- C. Contractor shall employ utility locating services to locate any underground utilities within the limits of work prior to the start of any excavating, cutting, coring, and/or drilling work. Contractor shall subsequently be responsible for repairs of any located underground utilities damaged by construction activities.

1.10 UTILITY SHUTDOWNS AND INTERRUPTIONS

- A. Contractor shall give the County a minimum of three (3) days written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. The County will set exact time and duration for shutdown and will assist Contractor with shutdown. Work required to re-establish utility services shall be performed by the Contractor.
- B. Contractor shall obtain County's written approval as indicated in the General Conditions in advance of deliveries of material or equipment or other activities that may conflict with County's use of the building(s) or adjacent facilities.

1.11 STRUCTURAL INTEGRITY

- A. Contractor shall be responsible for and supervise each operation and work that could affect structural integrity of various building elements, both permanent and temporary.
- B. Contractor shall include structural connections and fastenings as indicated or required for complete performance of the Work.

1.12 WORK SEQUENCE

- A. Contractor shall be responsible for compliance with all requirements outlined in the hazardous materials sections of the Contract Documents.
- B. Construct Work in stages and at times to accommodate County operation requirements during the construction period; coordinate construction schedule and operations with the County.
- C. Contractor shall develop a Phasing Schedule, coordinated with the County as shown in Section 1.13 below. Provide moving dates in the Phasing Schedule to show planned start dates and durations for relocation of County staff, based on completion of phase 1 of the work. Liquidated damages may be assessed as

described in the Contract Documents for failure to achieve milestone dates.

- D. This facility will and must be occupied during construction. Contractor is to coordinate work with the County and maintain safe access to the building at all times and shall not disrupt ongoing uses. Contractor must comply with the following requirements:
- (1) If Contractor must shut down power to any part of the site, Contractor must provide temporary power for that section of the site.
 - (2) Scope of work includes utility and systems upgrade and replacement that may impact the entire site. Work must be coordinated so that site-wide systems remain functional at all times until new systems work is complete and tested.

1.13 PHASING SCHEDULE - Example

No.	Milestones	Start	Complete
1	Notice to Proceed	Date	
2	Submittals		
3	Master Schedule		
4	Safety Plan		
5	Preconstruction Meeting		
6	Mobilize		
7	Site Set Up		
8	Demolition and groundworks		
9	Drainage Works and Surfacing		
10	Supply and Install of equipment		
11	Final Contract Completion		

- A. The “Start” dates included in the phasing schedule indicate the date that work is to begin on the identified milestone scope of work.
- B. The “Complete” dates included in the phasing schedule indicates that the following must be complete:
- (1) The entire scope of work for the milestone work must be complete, including all utility work up to the building and all final termination and operation of all building systems.
 - (2) Fire alarm, telephone, data, public address, and all other systems final connections must be complete, and systems programmed and tested so that fully functional systems are provided.
 - (3) All punch list work must be complete.
 - (4) Maintenance and Operations Manuals must be submitted to the County.

- (5) All required testing must be complete.
- (6) All training for all building systems must be complete.
- C. A minimum of six (6) keys for each and every lock must be provided. Where fewer keys are specified elsewhere in the Contract Documents, provide a minimum of 6 keys. All keys must be permanently stamped with three (3) characters identification as directed by the County.
- D. Record Documents for the scope of work of each Milestone included in the Phasing Schedule must be submitted within one week after completion of the Milestone. AutoCAD files to be provided at Final Contract Completion.
- E. Notice to proceed date is the anticipated date of issuance of the Notice to Proceed. If the Notice to Proceed is issued after the date indicated in the Phasing schedule, the start and completion dates of Milestone No. 1 and No. 9 will be adjusted by the number of days that the Notice to Proceed is delayed. If the Notice to Proceed is issued within 60 days of the anticipated schedule date noted above, the time to completion will be adjusted accordingly, but NO additional compensation will be considered.

PART 2 – PRODUCTS – Refer to power 26-00-0 and low voltage 27-00-00 specifications

PART 3 – EXECUTION Not Used.

END OF DOCUMENT

UNIT PRICES AND ALTERNATES

PART I – ALTERNATES

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions (00 72 13).
- B. Special Conditions (00 73 13).
- C. Bid Form (00 41 13).
- D. Instruction to Bidders (00 21 13).

1.02 DESCRIPTION

The items of work indicated below propose modifications to, substitutions for, additions to and/or deletions from the various parts of the Work specified in other Sections of the Specifications. The acceptance or rejection of any of the alternates is strictly at the option of the County subject to County's acceptance of Contractor's stated prices contained in this Proposal.

1.03 GENERAL

Where an item is omitted, or scope of Work is decreased, all Work pertaining to the item whether specifically stated or not, shall be omitted and where an item is added or modified or where scope of Work is increased, all Work pertaining to that required to render same ready for use on the Project in accordance with the intention of the Drawings and Specifications shall be included in an agreed upon price amount.

1.04 BASE BID

The Base Bid includes all work required to construct the Project completely and in accordance with the Contract Documents.

1.05 ALTERNATES (NOT USED)

PART 2 - UNIT PRICING

2.01 GENERAL

Contractor shall completely state all required figures based on Unit Prices listed below. Where scope of Work is decreased, all Work pertaining to the item, whether specifically stated or not, shall be omitted and where scope of Work is increased, all work pertaining to that item required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

2.02 UNIT PRICES

Furnish unit prices for each of the named items on a square foot, lineal foot, or per each basis, as applies. Unit prices shall include all labor, materials, services, profit, overhead, insurance, bonds, taxes, and all other incidental costs of Contractor, subcontractors, and supplier(s).

END OF DOCUMENT

DOCUMENT 01 26 00
CONTRACT MODIFICATIONS

Intentionally left blank.

END OF DOCUMENT

DOCUMENT 01 29 00

PAYMENT PROCEDURES

Payment procedures are located in General Conditions Document 00 72 13

END OF DOCUMENT

PROJECT MEETINGS

PART I – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions (00 72 13).
- B. Special Conditions (00 73 13).

1.02 PRECONSTRUCTION CONFERENCE:

- A. The contractor shall attend a conference at the Project Site prior to the start of construction for the purpose of determining Contractor's access to, and use of the site, verifying utilities, reviewing construction administrative procedures, and such other items as may be pertinent to the start of construction.
- B. The Preconstruction Conference shall address items including, but not limited to:
 - (1) Method of Procedures (MOP) – Exhibit A (7 pages).
 - (2) Job Hazard Analysis (JHA) – (included as part of Exhibit A above).
 - (3) ELATION application verification and training.
 - i. Subcontractor responsibilities.
 - (4) Logistics Plan/Site Access Procedures.
 - (5) Site Logistics and Security Plan as required by the General Conditions.
 - (6) Stipulated Sum, Document 00 72 13, paragraph 10.1.9.
 - (7) Safety Plan.
 - (8) Web Based Project Management Database (i.e., Procore for project documentation - RFI and Submittals).

1.03 PROGRESS MEETINGS:

- A. Construction Manager shall schedule and hold regular weekly progress meetings after a minimum of one week's prior written notice of the meeting date and time to all Invitees as indicated below.

- B. Location: Contractor's field office.
- C. The Contractor shall notify and invite the following entities (“Invitees”):
 - (1) County Representative(s).
 - (2) Contractor.
 - (3) Contractor's Project Manager.
 - (4) Contractor's Superintendent.
 - (5) Subcontractors/suppliers, as appropriate to the agenda of the meeting.
 - (6) Inspector of record, if any.
 - (7) Project Manager.
 - (8) Architect.
 - (9) Engineer(s), if any and as appropriate to the agenda of the meeting.
 - (10) Others, as appropriate to the agenda of the meeting.
- D. The County's, the Architect’s, and/or an engineer's Consultants will attend at their discretion, in response to the agenda.
- E. The County representative, the Construction Manager, and/or another County Agent shall take and distribute meeting notes to attendees and other concerned parties. If exceptions are taken to anything in the meeting notes, those exceptions shall be stated in writing to the County within five (5) working days following County's distribution of the meeting notes.

1.04 PRE-INSTALLATION/PERFORMANCE MEETING:

- A. Contractor shall schedule a meeting prior to the start of each of the following portions of the Work: cutting and patching of plaster and roofing, and other weather-exposed and moisture-resistant products. Contractor shall invite all Invitees to this meeting, and others whose work may affect or be affected by the quality of the cutting and patching work.
- B. Contractor shall review in detail prior to this meeting, the manufacturer's requirements and specifications, applicable portions of the Contract Documents, Shop Drawings, and other submittals, and other related work. At this meeting, invitees shall review and resolve conflicts, incompatibilities, or inadequacies discovered or anticipated.

- C. Contractor shall review in detail Project conditions, schedule, requirements for performance, application, installation, and quality of completed Work, and protection of adjacent Work and property.
- D. Contractor shall review in detail means of protecting the completed Work during the remainder of the construction period.

1.05 SPECIAL MEETINGS:

Special meetings may be requested by the County. Contractor, subcontractors, material suppliers and any other members of the project team may be required to attend.

END OF DOCUMENT

SECTION 01 31 19 – Exhibit A

METHOD OF PROCEDURE (MOP) AND JOB HAZARD ANALYSIS (JHA)

Approved

Revise and Resubmit

Rejected

Title: _____

MOP Tracking #: ____

Date of Request: [Click here to enter a date.](#) Project Number: _____

Contractor: _____ Subcontractor: _____

Date of Work: ____ ..to..... [Click here to enter a date.](#)

Start Time: _____ End Time: _____

EIR/SEIR MOP SCREENING (If any box is marked "Yes" then signatures below are required).

- 1. Is the scope of work within 20'-0" of a landscaped area? No Yes
- 2. Is the scope of work within 20'-0" of an existing building? No Yes
- 3. Is the scope of work off the property in the right of way? No Yes

This scope of work is not

an EIR/SEIR MOP	GSA	Date	Construction Manager PD	Date
-----------------	-----	------	-------------------------	------

Critical Path Schedule Item No Yes

Start Date per Schedule: TBD Duration TBD

Completion of prior MOP's required before proceeding : No Yes

If Yes, which MOP/MOP's _____ MOP scheduled completion: _____

Facility Support Req: No Yes

If Yes, staff size/expertise _____ Duration _____

Fall Protection Measures Req.: No Yes

If yes, type: OH ladder work, lift equipment, scaffolding, other _____

Dust Protection/Filter Protection: No Yes Security Req.: No Yes

Flag person Req.: No Yes

Utility Shut Down Req.: No Yes

If Yes, Hospital/Facility Systems Affected _____ Length of shut down _____

Utility/Systems contingency/backup plan: If req. attach written plan and sequence of operations.

Fire Watch Req.: No Yes

Proper Advance Notice Provided. (72 hours minimum req.): No Yes

If No Explain special circumstances _

Logistics plan for protection barriers/security/safety measures/ access attached:

Access area blocked or inaccessible: _____ duration: ____.

Risk Level to Operating Facility: Low Medium High

Deliveries Req.: No Yes
 If yes, size of truck: _____ Frequency of deliveries: _____.

Contract Work: No Yes
 C.O. Work: No Yes If Yes, C.O. # _____.

Description of Work: Detail work durations for specific steps/scope of work.

On-Site Contact- Contractor should contact the project PM, and the PM should then contact the engineer if needed.

Traffic Control – None

Hazards:

Observation:

Area affected:

Inspections

Overtime inspection costs associated with the scope of work outlined above shall be borne by:
 County/GSA Contractor No *Overtime* Inspection Required

Safety Measures

ICRA Permit Required: Yes Not Required If NO (IC initial and date) _____.
 Hot Work Permit Required: Yes Not Required
 Special Safety Req. Yes Not Required If YES Explain: _____.

Submitted By:

Contractor Manager/Superintendent:	Date:	Cell Phone #
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Submitted By:

Contractor Safety Manager:	Date:	Cell Phone #
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Recommended By:

IOR: N/A	Date:	Approved By: Cell Phone #
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Construction Manager: N/A	Date:	Cell Phone #
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Approved By:

Facility Manager of Engineering:	Date:	Cell Phone #
CDPH BLUE SHEET NOTIFICATION Yes <input type="checkbox"/> Not Required <input type="checkbox"/>	Date Sent:	
If Marked Yes Please Sign Below:		
Facility:		
County of Alameda, GSA:	Date:	Cell Phone #

*By signing above, signatory warrants and represents that he/she executed this MOP in his/her authorized capacity and that by his/her signature on this MOP, he/she or the entity upon behalf of which he/she acted, executed this MOD

JOB HAZARD ANALYSIS #: _____

Description of Task(s):
Workers Involved in the Task(s):
Equipment required to perform the Task(s):
Verification that Workers involved have been trained in the required equipment:
Time Duration of the Task(s):
Required Personal Protective Equipment (please check):
<input type="checkbox"/> Head <input type="checkbox"/> Hearing <input type="checkbox"/> Breathing <input type="checkbox"/> Eye <input type="checkbox"/> Hand <input type="checkbox"/> Foot <input type="checkbox"/> Knee <input type="checkbox"/> Full Body <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____

Verification that workers have been trained in the proper use of required PPE:

Specific Hazard(s) Involved/Potential Hazard(s):

Verification that Worker(s) involved understand the potential hazards and their triggers:

Applicable Safe Work Practice:

Special Precautions:

END OF EXHIBIT A

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions (00 72 13), including, without limitation, Contractor's Submittals and Schedules, Drawings and Specifications;
- B. Special Condition (00 73 13).

1.02 SECTION INCLUDES:

- A. Definitions:
 - (1) Shop Drawings and Product Data are as indicated in the General Conditions and include, but are not limited to, fabrication, erection, layout and setting drawings, formwork and falsework drawings, manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams. In addition, there are other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment or systems and all positions conform to the requirement of the Contract Documents, including, without limitation, the Drawings.
 - (2) "Manufactured" applies to standard units usually mass-produced; "fabricated" means specifically assembled or made out of selected materials to meet design requirements. Shop Drawings shall establish the actual detail of manufactured or fabricated items, indicate proper relation to adjoining work and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in the structure.
 - (3) Manufacturer's Instructions: Where any item of Work is required by the Contract Documents to be furnished, installed, or performed, at a minimum, in accordance with a specified product manufacturer's instruction, the Contractor shall procure and distribute copies of these to the County, the Architect, and all other concerned parties and shall furnish, install, or perform the work, at a minimum, in accordance with those instructions.
- B. Samples, Shop Drawings, Product Data, and other items as specified, in

accordance with the following requirements:

- (1) Contractor shall submit all Shop Drawings, Product Data, and Samples to the County, the Architect, and the Construction Manager.
- (2) Contractor shall comply with all time frames herein and in the General Conditions and, in any case, shall submit required information in sufficient time to permit proper consideration and action before ordering any materials or items represented by such Shop Drawings, Product Data, and/or Samples.
- (3) Contractor shall comply with all time frames herein and in the General Conditions and, in any case, shall allow sufficient time so that no delay occurs due to required lead time in ordering or delivery of any item to the Site. Contractor shall be responsible for any delay in progress of Work due to its failure to observe these requirements.
- (4) Time for completion of Work shall not be extended on account of Contractor's failure to promptly submit Shop Drawings, Product Data, and/or Samples.
- (5) Reference numbers on Shop Drawings shall have Architectural and/or Engineering Contract Drawings reference numbers for details, sections, and "cuts" shown on Shop Drawings. These reference numbers shall be in addition to any numbering system that Contractor chooses to use or has adopted as standard.
- (6) When the magnitude or complexity of submittal material prevents a complete review within the stated time frame, Contractor shall make this submittal in increments to avoid extended delays.
- (7) Contractor shall certify on submittals for review that submittals conform to Contract requirements. In event of any variance, Contractor shall specifically state in transmittal and on Shop Drawings, portions vary and require approval of a substitute. Also certify that Contractor-furnished equipment can be installed in allocated space.
- (8) Unless specified otherwise, sampling, preparation of samples, and tests shall be in accordance with the latest standard of the American Society for Testing and Materials.
- (9) Upon demand by Architect or County, Contractor shall submit samples of materials and/or articles for tests or examinations and consideration before Contractor incorporates same in Work. Contractor shall be solely responsible for delays due to sample(s) not being submitted in time to allow for tests. Acceptance or rejection will be expressed in writing. Work

shall be equal to approved samples in every respect. Samples that are of value after testing will remain the property of Contractor.

C. Submittal Schedule:

- (1) Contractor shall prepare its proposed submittal schedule that is coordinated with its proposed construction schedule and submit both to the County within ten (10) days after the date of the Notice to Proceed. Contractor's proposed schedules shall become the Project Construction Schedule and the Project Submittal Schedule after each is approved by the County. Contractor's Submittal Schedule shall include the following information: Date of Order, Date of Shop Drawing Submission, Date of Product Technical Information Submittal, Duration of Material lead time, Duration of fabrication, if any, Date of delivery of materials and / or equipment to the Site for incorporation into the Work without adversely impacting the overall schedule.
- (2) Contractor is responsible for all lost time should the initial submittal be rejected, marked "revise and resubmit", or other response that requires submission by the Contractor.
- (3) All Submittals shall be forwarded to the County by the date indicated on the approved Submittal Schedule, unless an earlier date is necessary to maintain the Construction Schedule, in which case those Submittals shall be forwarded to the County so as not to delay the Construction Schedule.

1.03 SHOP DRAWINGS:

- A. Contractor shall submit an electronic copy in PDF form. The County will review and return the PDF file with comments to Contractor.
- B. Before commencing installation of any Work, the Contractor shall submit and receive approval of all drawings, descriptive data, and material list(s) as required to accomplish Work.
- C. Review of Shop Drawings is regarded as a service to assist Contractor and in all cases original Contract Documents shall take precedence as outlined under General Conditions.
- D. No claim for extra time or payment shall be based on work shown on Shop Drawings unless the claim is (1) noted on Contractor's transmittal letter accompanying Shop Drawings and (2) Contractor has complied with all applicable provisions of the General Conditions, including, without limitation, provisions regarding changes and payment, and all required written approvals.
- E. County shall not review Shop Drawings for quantities of materials or number of items supplied.

- F. County and/or Architect's review of Shop Drawings will be general. County and/or Architect review does not relieve Contractor of responsibility for accuracy, proper fitting, construction of Work, furnishing of materials, or Work required by Contract Documents and not indicated on Shop Drawings. Shop Drawings reviewed by County and/or Architect is not to be construed as approving departures from Contract Documents.
- G. Review of Shop Drawings and Schedules does not relieve Contractor from responsibility for any aspect of those Drawings or Schedules that is a violation of local, County, State, or Federal laws, rules, ordinances, or rules and regulations of commissions, boards, or other authorities or utilities having jurisdiction.
- H. Before submitting Shop Drawings for review, Contractor shall check Shop Drawings of its subcontractors for accuracy and confirm that all Work contiguous with and having bearing on other work shown on Shop Drawings is accurately drawn and in conformance with Contract Documents.
- I. Submitted drawings and details must bear stamp of approval of Contractor:
 - (1) Stamp and signature shall clearly certify that Contractor has checked Shop Drawings for compliance with Drawings.
 - (2) If Contractor submits a Shop Drawing without an executed stamp of approval, or whenever it is evident (despite stamp) that Drawings have not been checked, the County and/or Architect will not consider them and will return them to the Contractor for revision and resubmission. In that event, it will be deemed that Contractor has not complied with this provision and Contractor shall bear risk of all delays to same extent as if it had not submitted any Shop Drawings or details.
- J. Submission of Shop Drawings (in either original submission or when resubmitted with correction) constitutes evidence that Contractor has checked all information thereon and that it accepts and is willing to perform Work as shown.
- K. Contractor shall pay for cost of any changes in construction due to improper checking and coordination. Contractor shall be responsible for all additional costs, including coordination. Contractor shall be responsible for costs incurred by itself, the County, the Architect, the Construction Manager, any other Subcontractor, or contractor, etc., due to improperly checked and/or coordination of submittals.
- L. Shop Drawings must clearly delineate the following information:
 - (1) Project name and address.
 - (2) Architect's name and project number.

- (3) Shop Drawing title, number, date, and scale.
 - (4) Names of Contractor, Subcontractor(s), and fabricator.
 - (5) Working and erection dimensions.
 - (6) Arrangements and sectional views.
 - (7) Necessary details, including complete information for making connections with other Work.
 - (8) Kinds of materials and finishes.
 - (9) Descriptive names of materials and equipment, classified item numbers, and locations at which materials or equipment are to be installed in the Work. Contractor shall use same reference identification(s) as shown on Contract Drawings.
- M. Contractor shall prepare composite drawings and installation layouts when required to solve tight field conditions.
- (1) Shop Drawings shall consist of dimensioned plans and elevations and must give complete information, particularly as to size and location of sleeves, inserts, attachments, openings, conduits, ducts, boxes, structural interferences, etc.
 - (2) Contractor shall coordinate these composite Shop Drawings and installation layouts in the field between itself and its Subcontractor(s) for proper relationship to the Work, the work of other trades, and the field conditions. The Contractor shall check and approve the submittal(s) before submission for final review.

1.04 PRODUCT DATA OR NON-REPRODUCIBLE SUBMITTALS:

- A. Contractor shall submit manufacturer's printed literature in original form, electronic PDF file. Any fading type of reproduction will not be accepted. County shall return one (1) copy to the Contractor, who shall reproduce whatever additional copies it requires for distribution.
- B. Contractor shall submit a complete list (electronically via PDF format) of all major items of mechanical, plumbing, and electrical equipment and materials in accordance with the approved Submittal Schedule, except as required earlier to comply with the approved Construction Schedule. Other items specified are to be submitted prior to commencing Work. Contractor shall submit items of like kind at one time in a neat and orderly manner. Partial lists will not be acceptable.

- C. Submittals shall include manufacturer's specifications, physical dimensions, and ratings of all equipment. Contractor shall furnish performance curves for all pumps and fans. Where printed literature describes items in addition to that item being submitted, submitted item shall be clearly marked on sheet and superfluous information shall be crossed out. If highlighting is used, Contractor shall mark all copies.
- D. Equipment submittals shall be complete and include space requirements, weight, electrical and mechanical requirements, performance data, and supplemental information that may be requested.

1.05 SAMPLES:

- A. Contractor shall submit for approval Samples as required and within the time frame in the Contract Documents. Materials such as concrete, mortar, etc., which require on-site testing will be obtained from Project Site.
- B. Contractor shall submit six (6) samples except where greater or lesser number is specifically required by Contract Documents including, without limitation, the Specifications.
 - (1) Samples must be of sufficient size and quality to clearly illustrate functional characteristics, with integrally related parts and attachment devices.
 - (2) Samples must show full range of texture, color, and pattern.
- C. Contractor shall make all Submittals, unless it has authorized Subcontractor(s) to submit, and Contractor has notified the County in writing to this effect.
- D. Samples to be shipped prepaid or hand-delivered to the County.
- E. Contractor shall mark samples to show name of Project, name of Contractor submitting, Contract number and segment of Work where representative Sample will be used, all applicable Specifications Sections and documents, Contract Drawing Number and detail, and ASTM or FS reference, if applicable.
- F. Contractor shall not deliver any material to Site prior to receipt of County's and/or Architect's completed written review and approval. Contractor shall furnish materials equal in every respect to approved Samples and execute Work in conformance therewith.
- G. County and/or Architect's review, acceptance, and/or approval of Sample(s) will not preclude rejections of any material upon discovery of defects in same prior to final acceptance of completed Work.
- H. After a material has been approved, no change in brand or make will be permitted.

- I. Contractor shall prepare its Submittal Schedule and submit Samples of materials requiring laboratory tests to specified laboratory for testing not less than ninety (90) days before such materials are required to be used in Work.
- J. Samples which are rejected must be resubmitted promptly after notification of rejection and be marked "Resubmitted Sample" in addition to other information required.
- K. Field Samples and Mock-Ups are to be removed by Contractor at County's direction:
 - (1) Size: As Specified.
 - (2) Furnish catalog numbers and similar data, as requested.

1.06 REVIEW AND RESUBMISSION REQUIREMENTS:

- A. The County will arrange for review of Sample(s), Shop Drawing(s), Product Data, and other submittal(s) by appropriate reviewer and return to Contractor as provided below within twenty-one (21) day after receipt or within twenty-one (21) days after receipt of all related information necessary for such review, whichever is later.
- B. One (1) copy of product or materials data will be returned to Contractor with the review status.
- C. Samples to be incorporated into the Work will be returned to Contractor, together with a written notice designating the Sample with the appropriate review status and indicating errors discovered on review, if any. Other Samples will not be returned, but the same notice will be given with respect thereto, and that notice shall be considered a return of the Sample.
- D. Contractor shall revise and resubmit any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) as required by the reviewer. Such resubmittals will be reviewed and returned in the same manner as original Sample(s), Shop Drawing(s), Product Data, and other submittal(s), within fourteen (14) days after receipt thereof or within fourteen (14) days after receipt of all related information necessary for such review.
- E. Contractor may proceed with any of the Work covered by Sample(s), Shop Drawing(s), Product Data, and other submittal(s) upon its return if designated as no exception taken, or revise as noted, provided the Contractor proceeds in accordance with the County's and/or the Architect's notes and comments.
- F. Contractor shall not begin any of the work covered by a Sample(s), Shop

Drawing(s), Product Data, and other submittal(s), designated as revise and resubmit or rejected, until a revision or correction thereof has been reviewed and returned to Contractor.

- G. Sample(s), Shop Drawing(s), Product Data, and other submittal(s) designated as revise and resubmit or rejected and requiring resubmittal, shall be revised, or corrected and resubmitted to the County no later than fourteen (14) days or a shorter period as required to comply with the approved Construction Schedule, after its return to Contractor.
- H. Neither the review nor the lack of review of any Sample(s), Shop Drawing(s), Product Data, and other submittal(s) shall waive any of the requirements of the Contract Documents or relieve Contractor of any obligation thereunder.
- I. County and/or Architect's review of Shop Drawings does not relieve the Contractor of responsibility for any errors that may exist. Contractor is responsible for the dimensions and design of adequate connections and details and for satisfactory construction of all the Work.

END OF DOCUMENT

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, (00 72 13) including, without limitation, Obtaining of Permits and Licenses and work to comply with all applicable regulations;
- B. Special Conditions (00 73 13);
- C. Quality Control (01 45 00).

1.02 DESCRIPTION:

- A. This section covers the general requirements for regulatory requirements pertaining to the Work and is supplementary to all other regulatory requirements mentioned or referenced elsewhere in the Contract Documents.

1.03 REQUIREMENTS OF REGULATORY AGENCIES:

- A. All statutes, ordinances, laws, rules, codes, regulations, standards, and the lawful orders of all public authorities having jurisdiction of the Work, are hereby incorporated into these Contract Documents as if repeated in full herein and are intended to be included in any reference to Code or Building Code, unless otherwise specified, including, without limitation, the references in the list below. Contractor shall make available at the Site copies of all the listed documents applicable to the Work as the County and/or Architect may request, including, without limitation, applicable portions of the California Code of Regulations ("CCR").
- B. Items of deferred approval shall be clearly marked on the first sheet of the Architect's and/or Engineer's approved Drawings.
 - (1) Building Standards Administrative Code, Part 1, Title 24, CCR.
 - (2) California Building Code (CBC), Part 2, Title 24, CCR; (Uniform Building code volumes 1-3 and California Amendments).
 - (3) California Electrical Code (CEC), Part 3, Title 24, CCR; (National Electrical Code and California Amendments).

- (4) California Mechanical Code (CMC), Part 4, Title 24, CCR; (Uniform Mechanical Code and California Amendments).
- (5) California Plumbing Code (CPC), Part 5, Title 24, CCR; (Uniform Plumbing Code and California Amendments).
- (6) California Fire Code (CFC), Part 9, Title 24, CCR; (Fire Plumbing Code and California Amendments).
- (7) California Referenced Standards Code, Part 12, Title 24, CCR
- (8) Title 19, CCR, Public Safety, State Fire Marshal Regulations.
- (9) Partial List of Applicable NFPA Standards:
 - (a) NFPA 13 - Automatic Sprinkler System.
 - (b) NFPA 14 - Standpipes Systems.
 - (c) NFPA 17A - Wet Chemical System
 - (d) NFPA 24 - Private Fire Mains.
 - (e) (California Amended) NFPA 72 - National Fire Alarm Codes.
 - (f) NFPA 253 - Critical Radiant Flux of Floor Covering System.
 - (g) FPA 2001 - Clean Agent Fire Extinguishing Systems.

END OF DOCUMENT

ABBREVIATIONS AND ACRONYMS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions including without limitation, Definitions.
- B. Special Conditions.

1.02 DOCUMENT INCLUDES:

- A. Abbreviations used throughout the Contract Documents.
- B. Reference to a technical society, organization, or body is by abbreviation, as follows:

1.	AA	Aluminum Association
2.	AABC	Associated Air Balance Council
3.	AASHTO	American Association of State Highway and Transportation Officials
4.	AATCC	American Association of Textile Chemists and Colorists
5.	ACA	American Coatings Association
6.	ACI	American Concrete Institute
7.	ACPA	American Concrete Pipe Association
8.	ADC	Air Duct Council
9.	AFPA	American Forest and Paper Association
10.	AGA	American Gas Association
11.	AGC	Associated General Contractors of America
12.	AHA	American Hardboard Association
13.	AHRI	Air Conditioning and Refrigeration Institute
14.	AI	Asphalt Institute
15.	AIA	American Institute of Architects
16.	AISC	American Institute of Steel Construction
17.	AITC	American Institute of Timber Construction
18.	AISI	American Iron and Steel Institute
19.	ALI	Associated Laboratories, Inc.
20.	ALSC	American Lumber Standards Committee
21.	AMCA	Air Movement and Control Association

22.	AMPP	Association for Materials Protection and Performance
23.	ANSI	American National Standards Institute
24.	APA	American Plywood Association
25.	APA	Architectural Precast Association
26.	ARMA	Asphalt Roofing Manufacturers Association
27.	ASA	Acoustical Society of America
28.	ASCE	American Society of Civil Engineers
29.	ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
30.	ASLA	American Society of Landscape Architects
31.	ASME	American Society of Mechanical Engineers
32.	ASPE	American Society of Plumbing Engineers
33.	ASQC	American Society of Quality Control
34.	ASSE	American Society of Sanitary Engineering
35.	ASTM	American Society of Testing and Materials
36.	AWCI	Association of the Wall and Ceiling
37.	AWI	Architectural Woodwork Institute
38.	AWPA	American Wood Protection Association
39.	AWS	American Welding Society
40.	AWWA	American Water Works Association
41.	BEMA	Ballastwater Equipment Manufacturers Association
42.	BHMA	Builders' Hardware Manufacturers Association
43.	BIA	Brick Industry Association
44.	CAA	California Arborists Association
45.	CAGI	California Air and Gas Institute
46.	CALTRANS	California Department of Transportation
47.	CCR	California Code of Regulations
48.	CGA	Compressed Gas Association
49.	CISCA	Ceilings & Interior Systems Construction Association
50.	CISPI	Cast Iron Soil Pipe Institute
51.	CLFMI	Chain Link Fence Manufacturers Institute
52.	CMACN	Concrete Masonry Association of California and Nevada
53.	CPSC	Consumer Product Safety Commission
54.	CRA	California Redwood Association
55.	CRI	Carpet and Rug Institute
56.	CRSI	Concrete Reinforcing Steel Institute
57.	CS	Commercial Standards
58.	CSI	Construction Specifications Institute
59.	CTI	Cooling Tower Institute
60.	CTIOA	Ceramic Tile Institute of America
61.	CPA	Composite Panel Association
62.	DHA	Decorative Hardwoods Association

63.	DHI	Door and Hardware Institute
64.	DIPRA	Ductile Iron Pipe Research Association
65.	DOC	Department of Commerce
66.	DOT	Department of Transportation
67.	EJMA	Expansion Joint Manufacturers Association
68.	EPA	Environmental Protection Agency
69.	FCICA	Floor Covering Installation Contractors
70.	FGIA	Fenestration and Glazing Industry Alliance
71.	FGMA	Flat Glass Manufacturer's Association
72.	FM	Factory Mutual Global
73.	FS	Federal Specifications Unit
74.	GA	Gypsum Association
75.	HMA	Hardwood Manufacturers Association
76.	ICC	International Code Council
77.	IAPMO	International Association of Plumbing and Mechanical Officials
78.	IEEE	Institute of Electrical and Electronic Engineers
79.	IES	Illuminating Engineering Society
80.	ITS	Intertek Testing Services
81.	MCAA	Mechanical Contractors Association of America
82.	MS	Military Specifications
83.	MSS	Manufacturers Standardization Society for the Valve and Fittings Industry
84.	NAAMM	National Association of Architectural Metal Manufacturers
85.	NAIMA	North American Insulation Manufacturers Association
86.	NALP	National Association of Landscape Professionals
87.	NAPA	National Asphalt Pavement Association
88.	NCMA	National Concrete Masonry Association
89.	NCSEA	National Council of Structural Engineers Association
90.	NCSPA	National Corrugated Steel Pipe Association
91.	NEBB	National Environmental Balancing Bureau
92.	NEC	National Electrical Code
93.	NECA	National Electrical Contractors Association
94.	NEII	National Elevator Industry
95.	NEMA	National Electrical Manufacturers' Association
96.	NFPA	National Fire Protection Association
97.	NGA	National Glass Association
98.	NHLA	National Hardwood Lumber Association
99.	NIA	National Insulation Association
100.	NIST	National Institute of Standards and Technology
101.	NRCA	National Roofing Contractors Association
102.	NRCMA	National Ready Mixed Concrete Association
103.	NSF	National Sanitation Foundation

104.	NSI	Natural Stone Institute
105.	NTMA	National Terrazzo and Mosaic Association
106.	OSHA	Occupational Safety and Health Administration
107.	OSH Act	Occupational Safety and Health Act
108.	PCA	Painting and Decorating Contractors of America
109.	PCA	Portland Cement Association
110.	PDI	Plumbing and Drainage Institute
111.	PEI	Porcelain Enamel Institute
112.	PG&E	Pacific Gas and Electric Company
113.	PLASTICS	Plastics Industry Association
114.	PLIB	Pacific Lumber Inspection Bureau
115.	PPI	Plastic Pipe Institute
116.	PS	Product Standards
117.	RFCI	Resilient Floor Covering Institute
118.	RIS	Redwood Inspection Service
119.	SDI	Steel Deck Institute
120.	SDI	Steel Door Institute
121.	SJI	Steel Joist Institute
122.	SMA	Stucco Manufacturers Association
123.	SMACNA	Sheet Metal and Airconditioning Contractors
124.	TCA	Tile Council of America
125.	TPI	Truss Plate Institute
126.	TPI	Turfgrass Producers International
127.	UBC	Uniform Building Code
128.	UL	Underwriters Laboratories, Inc.
129.	UMC	Uniform Mechanical Code
130.	UNI	Uni-Bell PVC Pipe Association
131.	USDA	United States Department of Agriculture
132.	USG	United States Gypsum Corporation
133.	WA	Wallcoverings Association
134.	WCB	Wall and Ceiling Bureau
135.	WCLBMA	West Coast Lumber & Building Material Association
136.	WCMA	Window Covering Manufacturers Association
137.	WDMA	Window and Door Manufacturers Association
138.	WIC	Woodwork Institute of California
139.	WMMPA	Wood Moulding & Millwork Producers Association
140.	WRI	Wire Reinforcement Institute
141.	WWPA	Western Wood Products Association

END OF DOCUMENT

DEFINITIONS AND REFERENCE STANDARDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISION

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions including without limitation, Definitions;
- B. Special Conditions.

1.02 QUALITY ASSURANCE:

- A. For products or workmanship specified by association, trade, or Federal Standards, Contractor shall comply with requirements of the standard, except when more rigid requirements are specified in the Contract Documents or are required by applicable codes.
- B. Contractor shall conform to current reference standard publication date in effect on the date of bid opening.
- C. Contractor shall obtain copies of standards unless specifically required not to by the Contract Documents.
- D. Contractor shall maintain a copy of all standards at jobsite during submittals, planning, and progress of the specific Work, until final completion, unless specifically required not to by the Contract Documents.
- E. Should specified reference standards conflict with Contract Documents, Contractor shall request clarification from the County and/or the Architect before proceeding.
- F. The contractual relationship of the parties to the Contract shall not be altered from the contractual relationship as indicated in the Contract Documents by mention or inference otherwise in any referenced document.
- G. Governing Codes shall be as shown in the Contract Documents including, without limitation, the Specifications.

1.03 SCHEDULE OF REFERENCES:

The following information is intended only for the general assistance of the

Contractor, and the County does not represent that the information is current. It is the Contractor's responsibility to verify the correct information for each of the entities listed.

AA	Aluminum Association 1400 Crystal Drive Suite 430 Arlington, VA 22202 www.aluminum.org	703/358-2960
AABC	Associated Air Balance Council 1015 18 th St. NW, Suite 603 Washington, DC 20036 https://www.aabc.com/	202/737-0202
AAMA (FGIA)	American Architectural Manufacturers Association 1900 E. Golf Road, Suite 1250 Schaumburg, IL 60173-4268 https://fgiaonline.org/	847/303-5664
AASHTO @	American Association of State Highway and Transportation Officials 555 12 th Street NW, Suite 1000 Washington, DC 20004 https://www.transportation.org/	202/624-5800
AATCC	American Association of Textile Chemists and Colorists P.O. Box 12215 One Davis Drive Research Triangle Park, NC 27709-2215 www.aatcc.org	919/549-8141
ACA	American Coatings Association 901 New York Avenue, NW Washington, DC 20001 https://www.paint.org/	202/462-6272
ACI	American Concrete Institute 38800 Country Club Drive Farmington Hills, MI 48333-9094 www.aci-int.org	248/848-3800
ACPA	American Concrete Pipe Association	972/506-7216

5605 N. MacArthur Blvd, Suite 340
Irving, TX 75038
www.concrete-pipe.org

ADC	Air Diffusion Council 1901 N. Roselle Road, Suite 800 Schaumburg, IL 60195 www.flexibleduct.org	847/706-6750
AFPA	American Forest and Paper Association 1101 K Street, NW, Suite 700 Washington, DC 20005 https://www.afandpa.org/	202/463-2700
AGA	American Gas Association 400 North Capitol Street, NW, Suite 450 Washington, DC 20001 www.aga.com	202/824-7000
AHA	American Hardboard Association 1210 W. Northwest Hwy Palatine, IL 60067-1897 http://domensino.com/AHA/	847/934-8800
AHRI	Air Conditioning and Refrigeration Institute 2311 Wilson Blvd, Suite 400 Arlington, VA 22201 https://www.ahrinet.org/	703/524-8800
AI	Asphalt Institute 2696 Research Park Drive Lexington, KY 40511-8480 www.asphaltinstitute.org	859/ 288-4960
AIA	The American Institute of Architects 1735 New York Avenue, NW Washington, DC 20006-5292 www.aia.org	800/242-3837
AISC	American Institute of Steel Construction 130 East Randolph Street, Suite 2000 Chicago, IL 60601-2001 https://www.aisc.org/	312/670-2400
AITC	American Institute of Timber Construction 7012 S. Revere Pkwy., Suite 140	253/835-3344

	Englewood, CO 80112 www.aitc-glulam.org	
ALI	Associated Laboratories, Inc. P.O. Box 152837 Dallas, TX 75315 https://assoc-labs.com/	214/565-0593
ALSC	American Lumber Standards Committee 7470 New Technology Way, Suite F Frederick, MD 21703 https://www.alsc.org/	301/972-1700
AMCA	Air Movement and Control Association International, Inc. 30 W. University Drive Arlington Heights, IL 60004-1893 www.amca.org	847/394-0150
AMPP	Association for Materials Protection and Performance 15835 Park Ten Place Houston, TX 77084 https://www.ampp.org/home	800/797-6223
ANSI	American National Standards Institute 25 West 43rd Street, 4th Floor New York, NY 10036-8002 www.ansi.org	212/642-4900
APA	APA-The Engineered Wood Association 7011 S, 19 th Street Tacoma, WA 98466-5333 www.apawood.org	253/565-6600
APA	Architectural Precast Association 325 John Knox Road, Suite L103 Tallahassee, FL 32303 https://www.archprecast.org/	850/205-5637
ARMA	Asphalt Roofing Manufacturers Association 2331 Rock Spring Road Forest Hill, MD 21050 https://www.asphaltroofing.org/	443/640-1075
ASA	Acoustical Society of America	516/576-2360

1305 Walt Whitman Road, Suite 110
Melville, NY 11747-4300
<https://acousticalsociety.org/>

ASCE	American Society of Civil Engineers- World Headquarters 1801 Alexander Bell Drive Reston, VA 20190-4400 www.asce.org	800/548-2723 703/295-6000
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 180 Technology Parkway, NW Peachtree Corners, GA 30092 www.ashrae.org	800/527-4723
ASLA	American Society of Landscape Architects 636 Eye Street, NW Washington, DC 20001-3736 www.asla.org	202/898-2444
ASME	American Society of Mechanical Engineers Two Park Avenue New York, NY 10016-5990 www.asme.org	800/843-2763
ASPE	American Society of Plumbing Engineers 6400 Shafer Court, Suite 350 Rosemont, IL 60018-4914 https://www.aspe.org/	847/296-0002
ASQC	American Society for Quality Control 600 North Plankinton Avenue Milwaukee, WI 53203 www.asq.org	800/248-1946 414/272-8575
ASSE	American Society of Sanitary Engineering 18927 Hickory Creek Drive, Suite 220 Mokena, IL 60448 www.asse-plumbing.org	708/995-3019
ASTM	American Society for Testing and Materials 100 Barr Harbor Drive West Conshohocken, PA 19428-2959 www.astm.org	610/832-9500

AWCI	Association of the Wall and Ceiling Industries—The Byron Building 513 W Broad Street, Suite 210 Falls Church, VA 22046 www.awci.org	703/538-1600
AWPA	American Wood Protection Association P.O Box 361784 Birmingham, AL 35236-1794 https://awpa.com/	205/733-4077
AWS	American Welding Society 8669 NW 36 th Street, Suite 130 Miami, FL 33166-6672 https://www.aws.org/home	800/443-9353
AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235 www.awwa.org	800/926-7337 303/794-7711
BEMA	Ballastwater Equipment Manufacturers' Association 103 Oronoco Street, Suite 200 Alexandria, VA 22314 https://bwema.org/	
BHMA	Builders' Hardware Manufacturers Association 355 Lexington Avenue, 15th Floor New York, NY 10017-6603 https://buildershardware.com/	212/297-2122
CAA	California Arborists Association 2057 Lone Oak Avenue Napa, CA 94558 https://www.californialandcan.org/	707/224-8269
CAGI	Compressed Air and Gas Institute 1300 Summer Avenue Cleveland, OH 44115 https://www.cagi.org/	216/241-7333
CGA	Compressed Gas Association 8484 Westpark Drive, Suite 220 McLean, VA 22102 www.cganet.com	703/788-2700

CISCA	Ceilings & Interior Systems Construction Association P.O Box 293 Elmhurst, IL 60126 www.cisca.org	630/584-1919
CISPI	Cast Iron Soil Pipe Institute 2401 Fieldcrest Drive Mundelein, IL 60060 https://www.cispi.org/	224/ 864-2910
CPSC	Consumer Product Safety Commission 4330 East-West Hwy. Bethesda, MD 20814 https://www.cpsc.gov/	800/638-2772
CRA	California Redwood Association 818 Grayson Road, Suite 201 Pleasant Hill, CA 94523 http://www.calredwood.org/	925/935-1499
CRI	Carpet and Rug Institute 100 S Hamilton Street Dalton, GA 30720 https://carpet-rug.org/	706/278-3176
CRSI	Concrete Reinforcing Steel Institute 933 N. Plum Grove Road Schaumburg, IL 60173-4758 www.crsi.org	847/517-1200
CTIOA	Ceramic Tile Institute of America P.O Box 882552 Los Angeles, CA 90009 https://ctioa.org/	310/574-7800
CPA	Composite Panel Association 19465 Deerfield Avenue, Suite 306 Leesburg, VA 20176 https://www.compositepanel.org/	703/724-1128
DHA	Decorative Hardwoods Association 42777 Trade West Drive Sterling, VA 20166 https://www.decorativehardwoods.org/	703/435-2900

DHI	Door and Hardware Institute 2001 K Street, NW, 3 rd Floor North Washington, DC 20006 www.dhi.org	202/367-1134
DIPRA	Ductile Iron Pipe Research Association P.O Box 190306 Birmingham, AL 35219 https://dipra.org/	205/402-8700
DOC	Department of Commerce 1401 Constitution Ave, NW Washington, DC 20230 https://www.commerce.gov/	202/482-2000
DOT	Department of Transportation 1200 New Jersey Ave, SE Washington, DC 20590 https://www.transportation.gov/	202/366-4000
EJMA	Expansion Joint Manufacturers Association 25 N. Broadway Tarrytown, NY 10591-3201 https://www.ejma.org/	914/332-0040
EPA	Environmental Protection Agency- Region 9 75 Hawthorne Street San Francisco, CA 94105 https://www.epa.gov/	415/947-8000
FCICA	Floor Covering Installation Contractors Association 800 Roosevelt Rd., Bldg. C, Suite 31 Glen Ellyn, IL 60137 https://www.fcica.com/	630/672-3702
FM	Factory Mutual Global 270 Central Avenue Johnston, PI 02919-4949 https://www.fmglobal.com/	401/275-3000
FS	Federal Specifications Unit (Available from GSA) 470 East L'Enfant Plaza, SW, Suite 8100 Washington, DC 20407 https://www.gsa.gov/	202/619-8925

HMA	Hardwood Manufacturers Association 400 Penn Center Blvd., Suite 530 Pittsburgh, PA 15235-5605 www.hardwood.org	412/828-0770
IEEE	Institute of Electrical and Electronic Engineers 3 Park Avenue, 17 th Floor New York, NY 10016-5997 www.ieee.org	212/419-7900
IES	Illuminating Engineering Society 120 Wall Street, 17th Floor New York, NY 10005-4001 https://www.ies.org/	212/248-5000
ITS	Intertek Testing Services 22155 68 th Avenue South Kent, WA 98032-1937 https://www.intertek.com/	800/967-5352
MCAA	Mechanical Contractors Association of America 1385 Piccard Drive Rockville, MD 20850-4329 https://www.mcaa.org/	301/869-5800
MSS	Manufacturers Standardization Society for the Valve and Fittings Industry 127 Park Street, NE Vienna, VA 22180-4602 https://msshq.org/	703/281-6613
NAAMM	National Association of Architectural 800 Roosevelt Road, Building C, Suite 312 Glen Ellyn, IL 60137 https://www.naamm.org/	630/942-6591
NAIMA	North American Insulation Manufacturers Association 2013 Olde Regent Way, Suite 150, Box 120 Leland, NC 28451 https://insulationinstitute.org/about-naima/	703/684-0084
NALP	National Association of Landscape Professionals 12500 Fair Lakes Circle, Suite 200 Fairfax, VA 22033	703/ 736-9666

	https://www.landscapeprofessionals.org/	
NAPA	National Asphalt Pavement Association 6406 Ivy Lane, Suite 530 Greenbelt, MD 20770-1441 https://www.asphaltpavement.org/	888/468-6499
NCSPA	National Corrugated Steel Pipe Association 1255 23rd Street, NW, Suite 850 Washington, DC 20037 www.ncspa.org	202/452-1700
NEBB	National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877-4121 https://nebb.org/	301/977-3698
NECA	National Electrical Contractors Association 1200 Pennsylvania Avenue, NW, Suite 1200 Washington, DC 20004 https://www.necanet.org/	202/991-6300
NEII	National Elevator Industry 5537 SW Urish Road Topeka, KS 66610 https://nationalelevatorindustry.org/	703/589-9985
NEMA	National Electrical Manufacturers' Association 1300 N. 17 th Street, Suite 900 Arlington, VA 22209 www.nema.org	703/841-3200
NFPA	National Fire Protection Association One Batterymarch Park P.O. Box 9101 Quincy, MA 02169-7141 www.nfpa.org	800/344-3555 617/770-3000
NGA	National Glass Association with GANA 344 Maple Avenue West Vienna, VA 22180 https://www.glass.org/	703/442-4890
NHLA	National Hardwood Lumber Association P.O. Box 34518 Memphis, TN 38184-0518	901/377-1818

<https://nhla.com/>

NIA	National Insulation Association 516 Herndon Pkwy, Suite D Herndon, VA 20170 www.insulation.org	703/464-6422
NRCA	National Roofing Contractors Association O'Hare International Center 10255 W. Higgins Road, Suite 600 Rosemont, IL 60018-5607 https://www.nrca.net/	847/299-9070
NRMCA	National Ready Mixed Concrete Association 66 Canal Center Plaza, Suite 250 Alexandria, VA 22314 www.nrmca.org	703/706-4800
NSF	NSF International 789 N. Dixboro Road Ann Arbor, MI 48105 www.nsf.org	734/769-8010
SHA	Occupational Safety and Health Administration (U.S. Department of Labor) 200 Constitution Ave., NW Washington, DC 20210 https://www.osha.gov/	800/321-6742
PCA	Portland Cement Association 200 Massachusetts Ave, NW, Suite 200 Washington, DC 20001 https://www.cement.org/	202/408-9494
PCA	Painting and Decorating Contractors of America 2316 Millpark Drive Maryland Heights, MO 63043 https://www.pcapainted.org/	800/332-7322
PDI	Plumbing and Drainage Institute 800 Turnpike Street, Suite 300 North Andover, MA http://www.pdionline.org/	978/557-0720
PLASTICS	Plastics Industry Association	202/974-5200

	1425 K Street, NW, Suite 500 Washington, DC 20005 https://www.plasticsindustry.org/	
PLIB	Pacific Lumber Inspection Bureau 1010 South 336 th Street, Suite 210 Federal Way, WA 98003-7394 https://www.plib.org/	253/835-3344
PPI	Plastic Pipe Institute 105 Decker Court, Suite 825 Irving, TX 75062 https://plasticpipe.org/PPI-Home/Default.aspx	469/499-1044 469/499-1063
RFCI	Resilient Floor Covering Institute 115 Broad Street, Suite 201 LaGrange, GA 30240 https://rfci.com/	
RIS	Redwood Inspection Service c/o California Redwood Association 818 Grayson Road, Suite 201 Pleasant Hill, CA 94523	925/ 935-1499
SDI	Steel Deck Institute P.O. Box 426 Glenshaw, PA 15116 www.sdi.org	412/487-3325
SDI	Steel Door Institute 30200 Detroit Road Westlake, OH 44145-1967 https://steeldoor.org/	440/899-0100
SMA	Stucco Manufacturers Association 5733 E Santa Ana Canyon Road, Suite G-156 Anaheim, CA 92807 https://stuccomfgassoc.com/	714/473-9579
SMACNA	Sheet Metal and Airconditioning Contractors National Association, Inc. 4201 Lafayette Center Drive Chantilly, VA 20151-1209 www.smacna.org	703/803-2980
TCA	Tile Council of America	864/646-8453

	100 Clemson Research Blvd. Anderson, SC 29625 https://www.tcnatile.com/	
TPI	Turfgrass Producers International 444 E Roosevelt Road, Suite 346 Lombard, IL 60148 https://www.turfgrasssod.org/	847/649-5555
UL	Underwriters Laboratories, Inc. 333 Pfingston Road Northbrook, IL 60062 www.ul.com	847/272-8800
UNI	Uni-Bell PVC Pipe Association 201 E. John Carpenter Freeway, Suite 750 Irving, TX 75062 https://www.uni-bell.org/	972/243-3902
USDA	U.S. Department of Agriculture 14th St. and Independence Ave., SW Washington, DC 20250 https://www.usda.gov/	202/720-8732
USG	USG Corporation 550 West Adams Street Chicago, IL 60661 https://www.usg.com/content/usgcom/en.html	800/950-3839
WA	Wallcoverings Association 35 E Wacker Drive, Suite 850 Chicago, IL 60601 https://www.wallcoverings.org/	312/224-2574
WCB	Wall and Ceiling Bureau 5690 Sonoma Drive Pleasanton, CA 94566 https://www.wallandceilingbureau.org/	925/600-0472
WCMA	Window Covering Manufacturers Association	212/297-2122

355 Lexington Ave., 15th Floor
New York, NY 10017-6603
<https://wcmagnet.com/>

WDMA	Window & Door Manufacturers Association 2001 K Street, 3 rd Floor North Washington, DC 20006 https://www.wdma.com/	202/367/1157
WIC	Woodwork Institute of California 1455 Response Road, Suite 110 West Sacramento, CA 95815 https://woodworkinstitute.com/	916/372-9943
WMMPA	Wood Moulding & Millwork Producers Association 1282 Stabler Lane, Suite 630, Office 146 Yuba City, Ca 95993-2625 www.wmmpa.com	530-661-9591
WRI	Wire Reinforcement Institute 203 Loudoun Street, SW Leesburg, VA 20175-2718 https://www.wirereinforcementinstitute.org/	703/779-2339
WWPA	Western Wood Products Association 2 Centerpointe Drive, Suite 360 Lake Oswego, OR 97035 https://www.wwpa.org/	503/224-3930

END OF DOCUMENT

QUALITY ASSURANCE - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, (00 72 13) including, without limitation, Purchase of Materials and Equipment;
- B. Special Conditions; (00 73 13).
- C. Imported Materials Certification. (00 45 46 .06).

1.02 MATERIAL AND EQUIPMENT

- A. Only items approved by the County and/or Architect shall be used.
- B. Contractor shall submit lists of products and other product information in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.

1.03 MATERIAL AND EQUIPMENT COLORS

- A. The County and/or Architect will provide a schedule of colors.
- B. No individual color selections will be made until after approval of all pertinent materials and equipment and after receipt of appropriate samples in accordance with the Contract Documents, including, without limitation, the provisions regarding the submittals.
- C. Contractor shall request priority in writing for any item requiring advance ordering to maintain the approved Construction Schedule.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Contractor shall deliver manufactured materials in original packages, containers, or bundles (with seals unbroken), bearing name or identification mark of manufacturer.
- B. Contractor shall deliver fabrications in as large assemblies as practicable; where specified as shop-primed or shop-finished, package or crate as required to

preserve such priming or finish intact and free from abrasion.

- C. Contractor shall store materials in such a manner as necessary to properly protect them from damage. Materials or equipment damaged by handling, weather, dirt, or from any other cause will not be accepted.
- D. Materials are not acceptable that have been warehoused for long periods of time, stored, or transported in improper environment, improperly packaged, inadequately labeled, poorly protected, excessively shipped, deviated from normal distribution pattern, or reassembled.
- E. Contractor shall store material so as to cause no obstructions of sidewalks, roadways, and underground services. Contractor shall protect material and equipment furnished under Contract.
- F. Contractor may store materials on Site with prior written approval by the County, all material shall remain under Contractor's control and Contractor shall remain liable for any damage to the materials. Should the Project Site not have storage area available, the Contractor shall provide for off-site storage at no cost to County.
- G. When any room in Project is used as a shop or storeroom, the Contractor shall be responsible for any repairs, patching, or cleaning necessary due to that use. Location of storage space shall be subject to prior written approval by County.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers listed in various sections of Contract Documents are names of those manufacturers that are believed to be capable of supplying one or more of items specified therein.
- B. The listing of a manufacturer does not imply that every product of that manufacturer is acceptable as meeting the requirements of the Contract Documents.

2.02 FACILITIES AND EQUIPMENT

- A. Contractor shall provide, install, maintain, and operate a complete and adequate facility for handling, the execution, disposal, and distribution of material and equipment as required for proper and timely performance of Work connected with Contract.

2.03 MATERIAL REFERENCE STANDARDS

- A. Where material is specified solely by reference to “standard specifications” and if requested by County, Contractor shall submit for review data on actual material proposed to be incorporated into Work of Contract listing name and address of vendor, manufacturer, or producer, and trade or brand names of those materials, and data substantiating compliance with standard specifications.

PART 3 - EXECUTION

3.01 WORKMANSHIP

- A. Where not more specifically described in any other Contract Documents, workmanship shall conform to methods and operations of best standards and accepted practices of trade or trades involved and shall include items of fabrication, construction, or installation regularly furnished or required for completion (including finish and for successful operation, as intended).
- B. Work shall be executed by tradespersons skilled in their respective lines of Work. When completed, parts shall have been durably and substantially built and present a neat appearance.

3.02 COORDINATION

- A. Contractor shall coordinate installation of Work to not interfere with installation of others. Adjustment or rework because of Contractor’s failure to coordinate will be at no additional cost to County.
- B. Contractor shall examine in-place work for readiness, completeness, fitness to be concealed or to receive other work, and in compliance with Contract Documents. Concealing or covering Work constitutes acceptance of additional cost which will result should in-place Work be found unsuitable for receiving other Work or otherwise deviating from the requirements of the Contract Documents.

3.03 COMPLETENESS

- A. Contractor shall provide all portions of the Work, unless clearly stated otherwise, installed complete and operational with all elements, accessories, anchorages, utility connections, etc., in manner to assure well-balanced performance, in accordance with manufacturer's recommendations and by Contract Documents. For example, electric water coolers require water, electricity, and drain services; roof drains require drain system; sinks fit within countertop, etc. Terms such as "installed complete," "operable condition," "for use intended," "connected to all utilities," "terminate with proper cap," "adequately anchored," "patch and refinish," "to match similar," should be assumed to apply in all cases, except where completeness of functional or operable condition is specifically stated as not required.

3.04 APPROVED INSTALLER OR APPLICATOR

- A. Installation by a manufacturer's approved installer or applicator is an understood part of Specifications and only approved installer or applicator is to provide on-site Work where specified manufacturer has on-going program of approving (i.e., certifying, bonding, re-warranting) installers or applicators. Newly established relationships between a manufacturer and an installer or applicator that does not have other approved applicator work in progress or completed is not approved for this Project.

3.05 MANUFACTURER'S RECOMMENDATIONS

- A. All installations shall be in accordance with manufacturer's published recommendations and specific written directions of manufacturer's representative. Should Contract Documents differ from recommendations of manufacturer or directions of his representative, Contractor shall analyze differences, make recommendations to the County and the Architect in writing, and shall not proceed until interpretation or clarification has been issued by the County and/or the Architect.

END OF DOCUMENT

QUALITY CONTROL

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, (00 72 13) including, without limitation, Inspections and Tests, Uncovering of Work and Non-conforming of Work and Correction of Work;
- B. Special Conditions (00 73 13).

1.02 RELATED CODES:

- A. The Work is governed by requirements of Title 24, California Code of Regulations ("CCR"), and the Contractor shall keep a copy of these available at the job Site for ready reference during construction.

1.03 OBSERVATION AND SUPERVISION:

The County and Architect or their appointed representatives will review the Work and the Contractor shall provide facilities and access to the Work at all times as required to facilitate this review. Administration by the Architect and any consulting Structural Engineer will be in accordance with applicable regulations.

1.04 TESTING AGENCIES:

- A. Testing agencies and tests shall be in conformance with the General Documents.
- B. Testing and inspection in connection with earthwork shall be under the direction of the County's consulting soils engineer, if any, referred to hereinafter as the "Soils Engineer."
- C. Testing and inspection of construction materials and workmanship shall be performed by a qualified laboratory, referred to hereinafter as the "Testing Laboratory." The Testing Laboratory shall be under direction of an engineer registered in the State of California, shall conform to requirements of ASTM E329, and shall be employed by or in contract with the County.

1.05 TESTS AND INSPECTIONS:

- A. The Contractor shall be responsible for notifying the Construction Manager of all required tests and inspections. Contractor shall notify the Construction Manager forty-eight (48) hours in advance of performing any Work requiring testing or inspection.
- B. The Contractor shall provide access to Work to be tested and furnish incidental labor, equipment, and facilities to facilitate all inspections and tests.
- C. The County will pay for first inspections and tests required by the “CCR”, and other inspections or tests that the County and/or the Architect may direct to have made, including the following principal items:
 - (1) Tests for concrete mix designs, including tests of trial batches.
 - (2) Tests and inspections for structural steel work.
 - (3) Field tests for framing lumber moisture content.
 - (4) Additional tests directed by the County that establish that materials and installation comply with the Contract Documents.
 - (5) Test and observation of welding and expansion anchors.
 - (6) Test and observation of anchors for ceiling grids, seismic bracing systems, and other equipment and systems that utilize anchored ceiling cables.
- D. The County may at its discretion, pay and back charge the Contractor for:
 - (1) Retests or reinspection, if required, and tests or inspections required due to Contractor error or lack of required identifications of material.
 - (2) Uncovering of work in accordance with Contract Documents.
 - (3) Testing done on weekends, holidays, and overtime will be chargeable to the Contractor for the overtime portion.
 - (4) Testing done off Site.
- E. Testing and inspection reports and certifications:
 - (1) If initially received by Contractor, Contractor shall provide to each of the following a copy of the agency or laboratory report of each test or inspection or certification.
 - a. The County;

- b. The Construction Manager, if any;
- c. The Architect;
- d. The Consulting Engineer, if any;
- e. Other Engineers on the Project, as appropriate; and
- f. The Contractor.

PART 2 - PRODUCTS

2.01 TYPE OF TEST AND INSPECTIONS (As Applies to the Project):

- A. Reinforcing, Steel
- B. Structural Steel Per Title 24 and as noted:
 - (1) Material: Steel per Table in Title 24, Section 2712.
 - (2) Qualification of Welders (UBC Std. 27-6).
 - (3) Shop fabrication (Section 2712(d). Structural steel only).
 - (4) Shop and field welding (Section 2712(e)).

END OF DOCUMENT

TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions (00 72 13).
- B. Special Conditions (00 73 13).
- C. Site Standards.

1.02 TEMPORARY UTILITIES:

- A. Contractor shall prepare and submit a Site Usage Plan showing how the Contractor intends to use the site for staging, deliveries, material storage, vehicle routes, trash containment and removal, temporary electrical service, personnel pathways, toilets, and other temporary facilities. Should the Site Usage Plan change in different phases of the Work, Contractor shall modify the Site Usage Plan indicating the dates it is expected to be revised and defining the revised areas and usage requirements. The County will review the Contractor's Site Usage Plan each time it is submitted and shall determine if it is acceptable. Under no circumstances will the County warrant or guarantee that the site will accommodate all usages, functions, and spaces that the Contractor perceives are necessary for it to perform its work. The Contractor assumes full risk and liability for the proper and necessary functions of the site. Should the County approve or reject the Contractor's Site Usage Plan at no time will the County assume any liability that the Site Usage Plan will be sufficient to perform its work.
- B. Electric Power and Lighting
 - (1) The County will furnish and pay for power during the work to the extent power is available in the building(s) or on the Site. The Contractor shall be responsible for providing temporary facilities required to deliver that power service from its existing location in the building(s) or on the Site to point of intended use.
 - (2) Contractor shall verify characteristics of power available in building(s) or on the Site. Contractor shall take all actions required to make modifications where power of higher voltage or different phases of current

are required. Contractor shall be fully responsible for providing that service and shall pay all costs required therefor.

- (3) The Contractor shall furnish, wire for, install, and maintain temporary electrical lights wherever it is necessary to provide illumination for the proper performance and/or observation of the Work: a minimum of 20 foot-candles for rough work and 50 foot-candles for finish work.

C. Heat and Ventilation

- (1) Contractor shall provide temporary heat to maintain environmental conditions to facilitate progress of the Work, to meet specified minimum conditions for the installation and curing of materials, and to protect materials and finishes from damage due to improper temperature and humidity conditions. Portable heaters shall be standard units complete with controls.
- (2) Contractor shall provide forced ventilation and dehumidification, as required, of enclosed areas for proper installation and curing of materials, to disperse humidity, and to prevent hazardous accumulations of dust, fumes, vapors, and gases.
- (3) Contractor shall pay the costs of installation, maintenance, operation, and removal of temporary heat and ventilation, including costs for fuel consumed, required for the performance of the Work.

D. Water

- (1) The County will furnish and pay for water during the work to the extent water is then available in the building(s) or on the Site. The Contractor shall be responsible for providing temporary facilities required to deliver such utility service from its existing location in the building(s) or on the Site to point of intended use.
- (2) Contractor shall use backflow preventers on water lines at point of connection to County's water supply. Backflow preventers shall comply with requirements of Uniform Plumbing Code.
- (3) Contractor shall make potable water available for human consumption.

E. Sanitary Facilities

- (1) Contractor shall provide sanitary temporary facilities in no fewer numbers than required by law and such additional facilities as may be directed by the County for the use of all workers. The facilities shall be maintained in

a sanitary condition at all times and shall be left at the Site until removal is directed by the County or Contractor completes all other work at the Site.

- (2) Use of toilet facilities in the Work under construction shall not be permitted except by consent of the County.

F. Telephone Service

- (1) Contractor shall arrange with local telephone service company for telephone service for the performance of the Work. Contractor shall, at a minimum, provide in its field office one line for telephone and one line for fax machine.
- (2) Contractor shall pay the costs for telephone and fax lines installation, maintenance, service, and removal.

G. Fire Protection:

- (1) Contractor shall provide and maintain fire extinguishers and other equipment for fire protection. Such equipment shall be designated for use for fire protection only and shall comply with all requirements of the California Fire, State Fire Marshall and/or its designee.
- (2) Where on-site welding and burning of steel is unavoidable, Contractor shall provide protection for adjacent surfaces.

H. Trash Removal:

- (1) See Document 01 74 19 (Construction Waste Management)

1.03 Section intentionally omitted.

1.04 BARRIERS AND ENCLOSURES:

- A. Contractor shall obtain the County's written permission for locations and types of temporary barriers and enclosures, including fire-rated materials proposed for use, prior to their installation.
- B. Contractor shall provide and maintain temporary enclosures to prevent public entry and to protect persons using other buildings and portions of the Site and/or Premises, the public, and workers. Contractor shall also protect the Work and existing facilities from the elements, and adjacent construction and improvements, persons, and trees and plants from damage and injury from demolition and construction operations.
- C. Contractor shall provide site access to existing facilities for persons using other buildings and portions of the Site, the public, and for deliveries and other services

and activities.

1.05 SECURITY AND PARKING:

- A. The Contractor shall be responsible for project security for materials, tools, equipment, supplies, and completed and partially completed Work.
- B. Contractor is responsible for any charges associated with parking of Contractor and Contractor employee's vehicles either at County facilities or off-site.

1.06 TEMPORARY CONTROLS:

- A. Noise Control
 - (1) Contractor acknowledges that adjacent facilities must remain in operation during all or a portion of the Work period, and it shall take all reasonable precautions to minimize noise as required by applicable laws and the Contract Documents.
 - (2) Notice of proposed noisy operations, including without limitation, operation of pneumatic demolition tools, concrete saws, and other equipment, shall be submitted to the County a minimum of forty-eight (48) hours in advance of their performance.
- B. Noise and Vibration
 - (1) Equipment and impact tools shall have intake and exhaust mufflers.
 - (2) Contractor shall cooperate with County to minimize and/or seize the use of noisy and vibratory equipment if that equipment becomes objectionable by its longevity.
- C. Dust and Dirt
 - (1) Contractor shall conduct demolition and construction operations to minimize the generation of dust and dirt and prevent dust and dirt from interfering with the progress of the Work and from accumulating in the Work and adjacent areas including, without limitation, occupied facilities.
 - (2) Contractor shall ensure that all hauling equipment and trucks carrying loads of debris shall have their loads sprayed with water or covered with tarpaulins, and as otherwise required by local and state ordinance.
 - (3) Contractor shall prevent dust and dirt from accumulating on walks, roadways, parking areas, and planting, and from washing into sewer and storm drain lines.

D. Water

Contractor shall not permit surface and subsurface water, and other liquids, to accumulate in or about the vicinity of the Premises. Should accumulation develop, Contractor shall control the water or other liquid, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

E. Pollution

- (1) No burning of refuse, debris, or other materials shall be permitted on or in the vicinity of the Premises.
- (2) Contractor shall comply with applicable regulatory requirements and anti-pollution ordinances during the conduct of the Work including, without limitation, demolition, construction, and disposal operations.

1.07 Section intentionally omitted.

1.08 PUBLICITY RELEASES:

- A. Contractor shall not release any information, story, photograph, plan, or drawing relating information about the Project to anyone, including press and other public communications medium, including, without limitation, on website(s).

END OF DOCUMENT

PRODUCT OPTIONS AND SUBSTITUTIONS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. Instructions to Bidders (00 21 13);
- B. General Conditions, including, without limitation, Substitutions For Specified Items (00 72 13);
- C. Special Conditions (00 73 13).

1.02 SUBSTITUTIONS OF MATERIALS AND EQUIPMENT:

- A. Catalog numbers and specific brands or trade names followed by the designation "or equal" are used in conjunction with material and equipment required by the Specifications to establish the standards of quality, utility, and appearance required. Substitutions which are equal in quality, utility, and appearance to those specified may be reviewed subject to the provisions of the General Conditions.
- B. Wherever more than one manufacturer's product is specified, the first-named product is the basis for the design used in the work and the use of alternative-named manufacturers' products or substitutes may require modifications in that design. If such alternatives are proposed by Contractor and are approved by the County and/or the Architect, Contractor shall assume all costs required to make necessary revisions and modifications of the design resulting from the substitutions requested by the Contractor.
- C. When materials and equipment are specified by first manufacturer's name and product number, second manufacturer's name and "or approved equal," supporting data for the second product, if proposed by Contractor, shall be submitted in accordance with the requirements for substitutions.
- D. If the County and/or Architect, in reviewing proposed substitute materials and equipment, require revisions or corrections to be made to previously accepted Shop Drawings and supplemental supporting data to be resubmitted, Contractor shall promptly do so. If any proposed substitution is judged by the County and/or Architect to be unacceptable, the specified material or equipment shall be provided.

- E. Samples may be required. Tests required by the County and/or Architect for the determination of quality and utility shall be made at the expense of Contractor, with acceptance of the test procedure first given by the County.

- F. In reviewing the supporting data submitted for substitutions, the County and/or Architect will use for purposes of comparison all the characteristics of the specified material or equipment as they appear in the manufacturer's published data even though all the characteristics may not have been particularly mentioned in the Contract Documents. If more than two (2) submissions of supporting data are required, the cost of reviewing the additional supporting data shall be borne by Contractor, and the County will deduct the costs from the Contract Price.

END OF DOCUMENT

DELIVERY, STORAGE AND HANDLING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Site Access, Conditions and Requirements;
- B. Special Conditions.

1.02 PRODUCTS

- A. Products are as defined in the General Conditions.
- B. Contractor shall not use and/or reuse materials and/or equipment removed from existing Premises, except as specifically permitted by the Contract Documents.
- C. Contractor shall provide interchangeable components of the same manufacturer, for similar components.

1.03 TRANSPORTATION AND HANDLING

- A. Contractor shall transport and handle Products in accordance with manufacturer's instructions.
- B. Contractor shall promptly inspect shipments to confirm that Products comply with requirements, quantities are correct, and products are undamaged.
- C. Contractor shall provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.04 STORAGE AND PROTECTION

- A. Contractor shall store and protect Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Contractor shall store sensitive products in weather-tight, climate-controlled enclosures.
- B. For exterior storage of fabricated Products, Contractor shall place on sloped supports, above ground as approved by the County.

- C. Contractor shall provide off-site storage and protection when Site does not permit on-site storage or protection.
- D. Contractor shall cover products subject to deterioration with impervious sheet covering and provide ventilation to avoid condensation.
- E. Contractor shall store loose granular materials on solid flat surfaces in a well-drained area and prevent mixing with foreign matter.
- F. Contractor shall provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.
- G. Contractor shall arrange storage of Products to permit access for inspection and periodically inspect to assure Products are undamaged and are maintained under specified conditions.

END OF DOCUMENT

FIELD ENGINEERING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Site Investigation, and Soils Investigation Report;
- B. Special Conditions;
- C. Site-Visit Certification.

1.02 REQUIREMENTS INCLUDED:

- A. Contractor shall provide and pay for field engineering services by a California-registered engineer, required for the project, including, without limitations:
 - (1) Survey work required in execution of the Project.
 - (2) Civil or other professional engineering services specified or required to execute Contractor's construction methods.

1.03 QUALIFICATIONS OF SURVEYOR OR ENGINEERS:

- A. Contractor shall only use a qualified licensed engineer or registered land surveyor, to whom County makes no objection. Contractor shall engage a qualified surveyor or engineer to examine existing conditions in walls, slabs and other conditions affecting performance of the Work. Provide written report to the County prior to any penetration work. Contractor shall coordinate with County for all penetrations.

1.04 SURVEY REFERENCE POINTS:

- A. Existing basic horizontal and vertical control points for the Project are those designated on the Drawings.
- B. Contractor shall locate and protect control points prior to starting Site Work and preserve all permanent reference points during construction. In addition, Contractor shall:

- (1) Make no changes or relocation without prior written notice to County and Architect.
- (2) Report to County and Architect when any reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.
- (3) Require surveyor to replace Project control points based on original survey control that may be lost or destroyed.

1.05 RECORDS:

- A. Contractor shall maintain a complete, accurate log of all control and survey work as it progresses.

1.06 SUBMITTALS:

- A. Contractor shall submit name and address of Surveyor and Professional Engineer to County and Architect prior to its/their work on the Project.
- B. On request of County and Architect, Contractor shall submit documentation to verify accuracy of field engineering work, at no additional cost to the County.
- C. Contractor shall submit a certificate signed by registered engineer or surveyor certifying that elevations and locations of improvements are in conformance or nonconformance with Contract Documents.

PART 2 – PRODUCTS

Not Used.

PART 3 - EXECUTION

- 3.01 Contractor is responsible for meeting all applicable codes, OSHA, safety, and shoring requirements.
- 3.02 Contractor is responsible for any re-surveying required by correction of nonconforming work.

END OF DOCUMENT

CUTTING AND PATCHING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions;
- C. Hazardous Materials Procedures and Requirements;
- D. Hazardous Materials Certification;
- E. Imported Materials Certification.

1.02 CUTTING AND PATCHING:

- A. Contractor shall be responsible for all cutting, fitting, and patching, including associated excavation and backfill, required to complete the Work or to:
 - (1) Make several parts fit together properly.
 - (2) Uncover portions of Work to provide for installation of ill-timed Work.
 - (3) Remove and replace defective Work.
 - (4) Remove and replace Work not conforming to requirements of Contract Documents.
 - (5) Remove Samples of installed Work as specified for testing.
 - (6) Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.
 - (7) Attach new materials to existing remodeling areas, including painting (or other finishes) to match existing conditions.
- B. In addition to Contract requirements, upon written instructions from the County, Contractor shall uncover Work to provide for observations of covered Work in accordance with the Contract Documents; remove samples of installed materials

for testing as directed by County; and remove Work to provide for alteration of existing Work.

- C. Contractor shall not cut or alter Work, or any part of it, in such a way that endangers or compromises the integrity of the Work, the Project, or work of others.

1.03 SUBMITTALS:

- A. Prior to any cutting or alterations that may affect the structural safety of Project, or work of others, and well in advance of executing such cutting or alterations, Contractor shall submit written notice to County pursuant to the applicable notice provisions of the Contract Documents, requesting consent to proceed with the cutting or alteration, including the following:

- (1) The Work of the County or other trades.
- (2) Structural value or integrity of any element of Project.
- (3) Integrity or effectiveness of weather-exposed or weather-resistant elements or systems.
- (4) Efficiency, operational life, maintenance, or safety of operational elements.
- (5) Visual qualities of sight-exposed elements.

- B. Contractor's Request shall also include:

- (1) Identification of Project.
- (2) Description of affected Work.
- (3) Necessity for cutting, alteration, or excavations.
- (4) Effects of Work on County, other trades, or structural or weatherproof integrity of Project.
- (5) Description of proposed Work:
 - (a) Scope of cutting, patching, alteration, or excavation.
 - (b) Trades that will execute Work.
 - (c) Products proposed to be used.

- (d) Extent of refinishing to be done.
- (6) Alternates to cutting and patching.
- (7) Cost proposal, when applicable.
- (8) The scheduled date the Contractor intends to perform the Work and the duration of time to complete the Work.
- (9) Written permission of other trades whose Work will be affected.

1.04 QUALITY ASSURANCE:

- A. Contractor shall ensure that cutting, fitting, and patching shall achieve security, strength, weather protection, appearance for aesthetic match, efficiency, operational life, maintenance, safety of operational elements, and the continuity of existing fire ratings.
- B. Contractor shall ensure that cutting, fitting, and patching shall successfully duplicate undisturbed adjacent profiles, materials, textures, finishes, colors, and that materials shall match existing construction. Where there is dispute as to whether duplication is successful or has been achieved to a reasonable degree, the County's decision shall be final.

1.05 PAYMENT FOR COSTS:

- A. Cost caused by ill-timed or defective Work or Work not conforming to Contract Documents, including costs for additional services of the County, its consultants, including but not limited to the Construction Manager, the Architect, the Project Inspector(s), Engineers, and Agents, will be paid by Contractor and/or deducted from the Contract by the County.
- B. County shall only pay for cost of Work if it is part of the original Contract Price or if a change has been made to the contract in compliance with the provisions of the General Conditions. Cost of Work performed upon instructions from the County, other than defective or nonconforming Work, will be paid by County on approval of written Change Order. Contractor shall provide written cost proposals prior to proceeding with cutting and patching.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Contractor shall provide for replacement and restoration of Work removed. Contractor shall comply with the Contract Documents and with the Industry Standard(s), for the type of Work, and the Specification requirements for each

specific product involved. If not specified, Contractor shall first recommend a product of a manufacturer or appropriate trade association for approval by the County.

- B. Materials to be cut and patched include those damaged by the performance of the Work.

PART 3 – EXECUTION

3.01 INSPECTION:

- A. Contractor shall inspect existing conditions of the Site and the Work, including elements subject to movement or damage during cutting and patching, excavating, and backfilling. After uncovering Work, Contractor shall inspect conditions affecting installation of new products.
- B. Contractor shall report unsatisfactory or questionable conditions in writing to County as indicated in the General Conditions and shall proceed with Work as indicated in the General Conditions by County.

3.02 PREPARATION:

- A. Contractor shall provide shoring, bracing and supports as required to maintain structural integrity for all portions of the Project, including all requirements of the Project.
- B. Contractor shall provide devices and methods to protect other portions of Project from damage.
- C. Contractor shall, provide all necessary protection from weather and extremes of temperature and humidity for the Project, including without limitation, any work that may be exposed by cutting and patching Work. Contractor shall keep excavations free from water.

3.03 ERECTION, INSTALLATION AND APPLICATION:

- A. With respect to performance, Contractor shall:
 - (1) Execute fitting and adjustment of products to provide finished installation to comply with and match specified tolerances and finishes.
 - (2) Execute cutting and demolition by methods that will prevent damage to other Work and provide proper surfaces to receive installation of repairs and new Work.
 - (3) Execute cutting, demolition excavating, and backfilling by methods that

will prevent damage to other Work and damage to settlement.

- B. Contractor shall employ original installer or fabricator to perform cutting and patching for:
 - (1) Weather-exposed surfaces and moisture-resistant elements such as roofing, sheet metal, sealants, waterproofing, and other trades.
 - (2) Sight-exposed finished surfaces.
- C. Contractor shall execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes as shown or specified in the Contract Documents including, without limitation, the Drawings and Specifications.
- D. Contractor shall fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces. Contractor shall conform to all Code requirements for penetrations or the Drawings and Specifications, whichever calls for a higher quality or more thorough requirement. Contractor shall maintain integrity of both rated and non-rated fire walls, ceilings, floors, etc.
- E. Contractor shall restore Work which has been cut or removed. Contractor shall install new products to provide completed Work in accordance with requirements of the Contract Documents and as required to match surrounding areas and surfaces.
- F. Contractor shall refinish all continuous surfaces to nearest intersection as necessary to match the existing finish to any new finish.

END OF DOCUMENT

CONSTRUCTION WASTE MANAGEMENT

PART 1 – GENERAL

1.01 SUMMARY

- A. This section specifies the requirements for the diversion of demolition (non-hazardous) and construction debris from landfill and submittal of the Waste Management Plan.
- B. Performance Requirement: Divert a **minimum of 65% of construction and demolition (non-hazardous) debris from landfill.**

1.02 DEFINITIONS

- A. "Conversion Rate" means the rate set forth in the standardized Conversion Rate Table approved by the County of Alameda for use in estimating the weight of materials identified in the Waste Management Plan.
- B. "Divert" means to use material for any purpose other than disposal in a landfill or transfer facility.
- C. "Good faith" shall be as defined by law.
- D. "Hauler" means the entity who transports construction and demolition debris to either a landfill or a recycling service.
- E. "Material Stream" means the flow of materials coming from a job site into markets for building materials. A stream can be either: (1) a specific material category that is diverted in a specific way; or (2) a mixture of several material categories that are diverted in a specific way.
- F. "Recycling Service" means an off-site service that provides processing of material and diversion from landfill.
- G. "Re:Source" is an online guide for reuse, repair, and recycling. It is maintained by StopWaste.Org and can be accessed at www.StopWaste.Org or www.resource.stopwaste.org.
- H. "Waste Management Plan" means a waste management plan required under this contract that is used to track and report the disposal of all construction debris generated on this project.
- I. "WasteTracking.com powered by Green Halo Systems" is the web-based system required for use in developing a waste management plan, uploading recycling data throughout the construction process, and submitting the final report demonstrating the project compliance online. More information about WasteTracking.com powered by Green Halo Systems is available by visiting them online at www.greenhalosystems.com or calling (888) 525-1301.

- J. “Universal Waste” are hazardous wastes that are widely produced by households and many different types of businesses. Universal wastes include televisions, computers, and other electronic devices as well as batteries, fluorescent lamps, mercury thermostats, and other mercury containing equipment, among others. Any unwanted item that falls within one of these waste streams can be handled, transported, and recycled following the requirements set forth in the universal waste regulations (UWR) (Cal. Code Regs, tit. 22, div. 4.5, ch. 23).

1.03 QUALITY ASSURANCE

- A. The Contractor shall obtain all special permits and licenses and meet all special requirements for performance and completion of the work of this section.
- B. Regulatory requirements
1. Approval of the Waste Management Plan and Waste Management Table using the WasteTracking.com powered by Green Halo Systems by the County’s Representative is required before beginning construction or demolition.
- C. Recycling service company qualifications – Submit certification for recycling services listed in the approved Waste Management Plan that accepted waste will be diverted from landfill. Certification shall be demonstrated in one of the following ways:
1. Recycling service is listed in the Green Halo System as an approved recycler for Alameda County projects; or
 2. Recycling service is listed within the RE:Source guide maintained by StopWaste.Org. and found at <https://resource.stopwaste.org/>; or
 3. If not listed as described in items 1 and 2 above, submit certification in writing from any recycling services that verifies accepted waste will be diverted from landfill.

1.04 SUBMITTALS

- A. Submit specified Waste Management Plan to indicate how waste will be diverted from landfills. Include procedures and schedule for debris disposal. Submittal shall be made using WasteTracking.com powered by Green Halo Systems using the following URL: [ACGSA.WasteTracking.com](https://www.acgsa.org/WasteTracking.com). Submittal is required **within 7 calendar days after receipt of Notice to Proceed**; and
- B. Submit written documentation from recycling services that are not listed in the WasteTracking.com powered by Green Halo Systems or the Stopwaste.Org RE:Source online guide identifying where the construction and demolition material is taken, what method or process is being used to recycle the material, and identifying applicable state and local permits held by the recycling service provider and recycling facility; and
- C. Submit completed Waste Management Plan to report on the means of disposal of waste generated from project at the following project milestones:
1. **Fifty percent (50%) progress payment**; and
 2. **One hundred percent (100%) construction complete**. County approval of final

Waste Management Plan is required before full release of retention.

1.05 WASTE MANAGEMENT PLAN

- A. Plan Development: Using the website [ACGSA.WasteTracking.com](https://www.acgsa.com/WasteTracking.com) develop a plan for diverting the specified percentage of construction debris from landfill. The plan shall include the following:
1. Submit **within 10-calendar days after the date of the Notice to Proceed.**
 2. Propose means and methods for collecting and separating each type of debris deemed reusable or recyclable.
 3. Identify the off-site recycling service and hauler of each designated debris item, who has agreed to accept and divert that item from landfill, in the proposed quantities anticipated. Schedule each item and list off-site recycling service and hauler company name, telephone number, address, and person contacted.
 4. Include a "good faith" estimate of each type of construction waste that would be generated if no diversion methods were implemented. Submit with calculations based upon weight or volume of each. The following items are subject to the "good faith" estimate and diversion requirement:
 - a. Concrete
 - b. Cardboard and other paper products
 - c. Ceiling Tiles (acoustic)
 - d. Drywall
 - e. Electrical Components (cables, etc.)
 - f. Film Plastic & Expanded Foam blocks
 - g. Mechanical Debris (ducts, controls, plumbing fixtures, etc.)
 - h. Scrap Metal
 - i. Unpainted Wood and Pallets
 - j. Other (painted wood & drywall, roofing, etc.)
 - k. Mixed C&D (defined as a mixture of three or more materials from construction or demolition sites that will be taken to a "qualified" facility for recycling.)
 - l. Trash/garbage
 - m. Universal Waste (may not be disposed of in landfill or comingled for recycling with other construction debris)
 5. Construction waste quantities entered in volume will be converted automatically using the defined Conversion Rate approved by Alameda County that is integrated into WasteTracking.com powered by Green Halo Systems.
- B. Plan Implementation
1. Contractor shall do all the following:
 - a. Retain a copy of, and upload into WasteTracking.com powered by Green Halo Systems, all weight tickets, copies of receipts and invoices and any other documentation related to the reuse, recycling, and disposal of generated waste/debris from demolition and construction activities; and
 - b. Maintain a log of each load of each category item diverted from landfill. Log

in separately debris sent to a Class III landfill and materials sent to recycling facilities.

- 1) Include in log: type of load, load weight, name of hauling service, name of recycling service or landfill, and date accepted by recycling service or by landfill.
 - 2) County reserves the right to audit the log at any time. Contractor shall retain and provide to the County all weight tickets, copies of receipts and invoices and any other documentation related to the disposal or recycling of generated waste/debris from demolition and construction activities.
- c. Units of measure: Use same units as stated in the approved plan "good faith" estimate of construction waste that would be generated if no remedial methods were implemented.
2. Material handling
- a. Separation facilities
 - 1) Designate a specific on-site area or areas to facilitate separation of materials for potential reuse, salvage, recycling, and return.
 - 2) Keep waste bins and pile areas neat and clean. Clearly mark bins for each category of waste. Do not co-mingle non-recyclable waste with materials designated for reuse or recycling.
 - b. Environmental controls during handling, storage, or transport: Do not permit designated materials to become contaminated or to contaminate site or surrounding areas.
3. Training and coordination
- a. Provide access and training as needed to subcontractors to the online construction and demolition debris waste management tool Green Halo Systems for the purposes of input of waste management information.
 - b. Furnish copies of the Waste Management Plan to all on-site supervisors, each subcontractor, and the County.
 - c. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all entities at the appropriate stages of the Project.
 - d. Meetings: Include construction waste management on the agenda of meetings. At a minimum, discuss waste management goals and issues at the following meetings:
 - 1) Pre-bid meetings.
 - 2) Pre-construction meeting.
 - 3) Regularly scheduled job-site meetings.

PART 2 - PRODUCTS

2.01 MATERIALS, EQUIPMENT AND FACILITIES

Furnish all materials, tools, equipment, devices, appurtenances, facilities, and services required for performing waste management of debris covered under this Section.

PART 3 - EXECUTION

3.01 EXAMINATION AND PREPARATION

- A. Set up and maintain in good standing a project account with WasteTracking.com powered by Green Halo Systems using the website [ACGSA.WasteTracking.com](https://www.acgsa.org/WasteTracking.com) to be used exclusively for this project to develop a waste management plan, upload all reuse, recycling and waste disposal data throughout the construction process, and submit the final online report demonstrating project compliance.
- B. Perform as required in the approved Waste Management Plan.

3.02 DISPOSAL OF DEBRIS

- A. Dispose of waste, trash, and debris in a safe, acceptable manner, in accordance with applicable laws and ordinances and as prescribed by authorities having jurisdiction. **Burying of trash and debris on the site is strictly prohibited.**
- B. Remove demolished materials from site as work progresses. Remove debris from the site so that its presence will not delay the progress of the work.
- C. Debris shall be the property of the Contractor and shall be removed and disposed of in a legal manner off the County's property in accordance with the approved Waste Management Plan described herein. Location of recycling facility or landfill site and length of haul shall be the Contractor's responsibility.

END OF DOCUMENT

PROTECTING INSTALLED CONSTRUCTION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions.

PART 2 - PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK:

- A. New Materials: As specified in the Contract Documents including, without limitation, in the Specifications, Contractor shall match existing products, conditions, and work for patching and extending work.
- B. Type and Quality of Existing Products: Contractor shall determine by inspection, by testing products where necessary, by referring to existing conditions and to the Work as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION:

- A. Contractor shall verify that demolition is complete and that areas are ready for installation of new Work.
- B. By beginning restoration Work, Contractor acknowledges and accepts the existing conditions.

3.02 PREPARATION:

- A. Contractor shall cut, move, or remove items as necessary for access to alterations and renovation Work. Contractor shall replace and restore these at completion.
- B. Contractor shall remove unsuitable material not as salvage unless otherwise indicated in the Contract Documents. Unsuitable material may include, without limitation, rotted wood, corroded metals, and deteriorated masonry and concrete. Contractor shall replace materials as specified for finished Work.

- C. Contractor shall remove debris and abandoned items from all areas of the Site and from concealed spaces.
- D. Contractor shall prepare surface and remove surface finishes to provide for proper installation of new Work and finishes.
- E. Contractor shall close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity. Contractor shall insulate ductwork and piping to prevent condensation in exposed areas. Contractor shall insulate building cavities for thermal and/or acoustical protection, as detailed.

3.03 INSTALLATION:

- A. Contractor shall coordinate Work of all alternations and renovations to expedite completion and to accommodate County occupancy.
- B. Designated Areas and Finishes: Contractor shall complete all installations in all respects, including operational, mechanical work and electrical work.
- C. Contractor shall remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring Products and finishes to original or specified condition.
- D. Contractor shall refinish visible existing surfaces to remain in renovated rooms and spaces, to specified condition for each material, with a neat transition to adjacent finishes.
- E. Contractor shall install products as specified in the Contract Documents, including without limitation, the Specifications.

3.04 TRANSITIONS:

- A. Where new Work abuts or aligns with existing, Contractor shall perform a smooth and even transition. Patched Work must match existing adjacent work in texture and appearance.
- B. When finished surfaces are cut so that a smooth transition with new Work is not possible, Contractor shall terminate existing surface along a straight line at a natural line of division and make a recommendation for resolution to the County and the Architect for review and approval.

3.05 ADJUSTMENTS:

- A. Where removal of partitions or walls results in adjacent spaces becoming one, Contractor shall rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
- B. Where a change of plane of 1/4 inch or more occurs, Contractor shall submit a

recommendation for providing a smooth transition to the County and the Architect for review and approval.

- C. Contractor shall trim existing doors as necessary to clear new floor finish and refinish trim as required.
- D. Contractor shall fit Work at penetrations of surfaces.

3.06 REPAIR OF DAMAGED SURFACES:

- A. Contractor shall patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- B. Contractor shall repair substrate prior to patching finish.

3.07 CULTIVATED AREAS AND OTHER SURFACE IMPROVEMENTS:

- A. Cultivated or planted areas and other surface improvements which are damaged by actions of the Contractor shall be restored by Contractor to their original condition or better, where indicated.
- B. Contractor shall protect and replace, if damaged, all existing guard posts, barricades, and fences.

3.08 FINISHES:

- A. Contractor shall finish surfaces as specified in the Contract Documents, including without limitations, the provisions of all Divisions of the Specifications.
- B. Contractor shall finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, Contractor shall refinish entire surface to nearest intersections.

3.09 CLEANING:

- A. Contractor shall continually clean the Site and the Premises as indicated in the Contract Documents, including without limitation, the provisions in the General Conditions and the Specifications regarding cleaning.

END OF DOCUMENT

SECTION 01 77 00

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, (00 72 13) including, without limitation, Completion of Work;
- B. Special Conditions; (00 73 13)
- C. Temporary Facilities and Controls. (01 50 00)
- D. Division 23 Heating, Ventilating, and Air Conditioning (HVAC)
- E. Division 26 Electrical
- F. Division 28 Electronic Safety and Security

1.02 CLOSEOUT PROCEDURES

Contractor shall comply with all closeout provisions as indicated in the General Conditions.

1.03 FINAL CLEANING

- A. Contractor shall execute final cleaning prior to final inspection.
- B. Contractor shall clean interior and exterior glass and surfaces exposed to view; remove temporary labels, tape, stains, and foreign substances, polish transparent and glossy surfaces, wax and polish new vinyl floor surfaces, vacuum carpeted and soft surfaces.
- C. Contractor shall clean equipment and fixtures to a sanitary condition.
- D. Contractor shall replace filters of operating equipment.
- E. Contractor shall clean debris from roofs, gutters, down spouts, and drainage systems.
- F. Contractor shall clean Site, sweep paved areas, and rake clean landscaped surfaces.

- G. Contractor shall remove waste and surplus materials, rubbish, and construction facilities from the Site.

1.04 ADJUSTING

- A. Contractor shall adjust operating products and equipment to ensure smooth and unhindered operation.
- B. Record Documents and Shop Drawings: Contractor shall legibly mark each item to record actual construction, including:
 - (1) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - (2) Field changes of dimension and detail.
 - (3) Details not on original Contract Drawings.
 - (4) Changes made by modification(s).
 - (5) References to related Shop Drawings and modifications.
- C. County will provide one set of reproducible drawings to Contractor.
- D. Contractor shall submit all required documents to County and/or Architect prior to or with its final Application for Payment.

1.06 INSTRUCTION OF COUNTY PERSONNEL:

- A. Before final inspection, at agreed upon times, Contractor shall instruct County's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. Contractor shall use operation and maintenance manuals as basis for instruction. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.
- C. Contractor shall prepare and insert additional data in Operation and Maintenance Manual when need for such data becomes apparent during instruction.

1.07 SPARE PARTS AND MAINTENANCE MATERIALS:

- A. Contractor shall provide products, spare parts, maintenance, and extra materials in quantities specified in the Specifications and in Manufacturer's recommendations.

- B. Contractor shall provide County all required Operation and Maintenance Data.
- C. Contractor shall provide County with list of equipment information and location.
List shall include:
 - (1) Device Name
 - (2) Manufacturer
 - (3) Model Number
 - (4) Serial Number
 - (5) Location
 - (6) IP Address assigned

PART 2 – PRODUCTS Not used.

PART 3 – EXECUTION Not used.

END OF DOCUMENT

OPERATION AND MAINTENANCE INSTRUCTIONS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, (00 72 13) including, without limitation, Completion of the Work;
- B. Special Conditions.(00 73 13)
- C. Division 23 Heating, Ventilating, and Air Conditioning (HVAC)
- D. Division 26 Electrical
- E. Division 27 Communications
- F. Division 28 Electronic Safety and Security

1.02 QUALITY ASSURANCE:

- A. Contractor shall prepare instructions and data by personnel experienced in maintenance and operation of described products.

1.03 FORMAT:

- A. Contractor shall prepare data in the form of an instructional manual entitled “OPERATIONS AND MAINTENANCE MANUAL & INSTRUCTIONS” (“Manual”).
- B. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two-inch maximum ring size. When multiple binders are used, Contractor shall correlate data into related consistent groupings. Contractor will provide a digital copy of the complete Operations and Maintenance Manual & Instructions in PDF format.
- C. Cover: Contractor shall identify each binder with typed or printed title "OPERATION AND MAINTENANCE MANUAL & INSTRUCTIONS"; and shall list title of Project and identify subject matter of contents.
- D. Contractor shall arrange content by systems process flow under section numbers

and sequence of Table of Contents of the Contract Documents.

- E. Contractor shall provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- F. Text: The content shall include Manufacturer's printed data, or typewritten data on 24-pound paper.
- G. Drawings: Contractor shall provide with reinforced punched binder tab and shall bind in with text; folding larger drawings to size of text pages.

1.04 CONTENTS, EACH VOLUME:

- A. Table of Contents: Contractor shall provide title of Project; names, addresses, and telephone numbers of the Architect, any engineers, subconsultants, Subcontractor(s), and Contractor with name of responsible parties; and schedule of products and systems, indexed to content of the volume.
- B. For Each Product or System: Contractor shall list names, addresses, and telephone numbers of Subcontractor(s) and suppliers, including local source of supplies and replacement parts.
- C. Product Data: Contractor shall mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- D. Drawings: Contractor shall supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Contractor shall not use Project Record Documents as maintenance drawings.
- E. Text: The Contractor shall include all information as required to supplement product data. Contractor shall provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- F. Warranties and Bonds: Contractor shall bind in one copy of each.

1.05 MANUAL FOR MATERIALS AND FINISHES:

- A. Building Products, Applied Materials, and Finishes: Contractor shall include product data, with catalog number, size, composition, and color and texture designations. Contractor shall provide information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Contractor shall include Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

- C. Moisture Protection and Weather Exposed Products: Contractor shall include product data listing applicable reference standards, chemical composition, and details of installation. Contractor shall provide recommendations for inspections, maintenance, and repair.
- D. Additional Requirements: Contractor shall include all additional requirements as specified in the Specifications.
- E. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.06 MANUAL FOR EQUIPMENT AND SYSTEMS:

- A. Each Item of Equipment and Each System: Contractor shall include description of unit or system, and component parts and identify function, normal operating characteristics, and limiting conditions. Contractor shall include performance curves, with engineering data and tests, and complete nomenclature, and commercial number of replaceable parts.
- B. Panelboard Circuit Directories: Contractor shall provide electrical service characteristics, controls, and communications.
- C. Contractor shall include color coded wiring diagrams as installed.
- D. Operating Procedures: Contractor shall include start-up, break-in, and routine normal operating instructions and sequences. Contractor shall include regulation, control, stopping, shutdown, and emergency instructions. Contractor shall include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Contractor shall include routine procedures and guide for troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- F. Contractor shall provide servicing and lubrication schedule, and list of lubricants required.
- G. Contractor shall include manufacturer's printed operation and maintenance instructions.
- H. Contractor shall include sequence of operation by controls manufacturer.
- I. Contractor shall provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- J. Contractor shall provide control diagrams by controls manufacturer as installed.

- K. Contractor shall provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- L. Contractor shall provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- M. Contractor shall provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- N. Additional Requirements: Contractor shall include all additional requirements as specified in Specification(s).
- O. Contractor shall provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.

1.08 SUBMITTAL:

- A. Contractor shall submit to the County for review two (2) hard copies and one (1) digital copy in PDF format of preliminary draft or proposed formats and outlines of the contents of the Manual within thirty (30) days of Contractor's start of Work.
- B. For equipment, or component parts of equipment put into service during construction and to be operated by County, Contractor shall submit draft content for that portion of the Manual within ten (10) days after acceptance of that equipment or component.
- C. Contractor shall submit two (2) hard copies and one (1) digital copy in PDF format of a complete Manual in final form prior to final Application for Payment. Copy will be returned with Architect/Engineer comments. Contractor must revise the content of the Manual as required by County prior to County's approval of Contractor's final Application for Payment.
- D. Contractor must submit two (2) hard copies and one (1) digital copy in PDF format of revised Manual in final form within ten (10) days after final inspection.

END OF DOCUMENT

WARRANTIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions (00 72 13) including, without limitation, Warranty/Guarantee Information;
- B. Special Conditions (00 73 13)
- C. Division 23 Heating, Ventilating, and Air Conditioning (HVAC)
- D. Division 26 Electrical
- E. Division 27 Communications
- F. Division 28(Electronic Safety and Security)

1.02 FORMAT

- A. Binders: Contractor shall use commercial quality, 8-1/2 by 11 inch, three-side rings, with durable plastic covers; two-inch maximum ring size.
- B. Cover: Contractor shall identify each binder with typed or printed title "WARRANTIES" and shall list title of Project.
- C. Table of Contents: Contractor shall provide title of Project; name, address, and telephone number of Contractor and equipment supplier, and name of responsible principal. Contractor shall identify each item with the number and title of the specific Specification, document, provision, or section in which the name of the product or work item is specified.
- D. Contractor shall separate each warranty with index tab sheets keyed to the Table of Contents listing, providing full information, and using separate typed sheets as necessary. Contractor shall list each applicable and/or responsible subcontractor(s), supplier(s), and/or manufacturer(s), with name, address, and telephone number of each responsible principal(s).

1.03 PREPARATION:

- A. Contractor shall obtain warranties, executed in duplicate by each applicable and/or responsible subcontractor(s), supplier(s), and manufacturer(s), within ten (10) days after completion of the applicable item or work. Except for items put into use with County's permission, Contractor shall leave date of beginning of time of warranty until the date of completion is determined.
- B. Contractor shall verify that documents are in proper form, contain full information, and are notarized, when required.
- C. Contractor shall co-execute submittals when required.
- D. Contractor shall retain warranties until time specified for submittal.

1.04 TIME OF SUBMITTALS:

- A. For equipment or component parts of equipment put into service during construction with County's permission, Contractor shall submit a draft warranty for that equipment or component within ten (10) days after acceptance of that equipment or component.
- B. Contractor shall submit for County approval all warranties and related documents within ten (10) days after date of completion. Contractor must revise the warranties as required by the County prior to County's approval of Contractor's final Application for Payment.
- C. For items of work delayed beyond date of completion, provide updated submittal within ten days after acceptance, listing the date of acceptance as start of warranty period.

END OF DOCUMENT

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS:

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Documents on Work;
- B. Special Conditions;
- C. Division 23 Heating, Ventilating, and Air Conditioning (HVAC)
- D. Division 26 Electrical
- E. Division 28 Electronic Safety and Security

PART 2 - RECORD DRAWINGS

2.01 GENERAL:

- A. The County will provide Contractor with AutoCAD drawing files of the original Contract Drawings, and Microsoft Word documents of the original contract Specifications.
- B. Contractor shall maintain at each Project Site one set of marked-up blueline prints and each month, or as otherwise agreed, shall transfer all changes and information to those marked-up blueline prints. Contractor shall submit to the County a PDF of the Project Record Drawings (“As-Builts”) showing all changes incorporated into the Work since the preceding monthly submittal. The Record Drawings shall be available at the Project Site. The Contractor shall submit two (2) hard copies and a digital copy in PDF format at the conclusion of the Project following review of the blueline prints.
- C. Label and date each Record Drawing "RECORD DOCUMENT" in legibly printed letters.
- D. All deviations in construction, including but not limited to pipe and conduit locations and deviations caused by without limitation Change Orders, Construction Claim Directives, RFI's, and Addenda, shall be accurately and legibly recorded by Contractor.

- E. Locations and changes shall be done by Contractor in a neat and legible manner and, where applicable, indicated by drawing a "cloud" around the changed or additional information.

2.02 RECORD DRAWING INFORMATION:

- A. Contractor shall record the following information:
 - (1) Locations of Work buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines, and conduits.
 - (2) Actual numbering of each electrical circuit.
 - (3) Locations of significant Work concealed inside each building whose general locations are changed from those shown on the Contract Drawings.
 - (4) Locations of all items, not necessarily concealed, which vary from the Contract Documents.
 - (5) Installed location of all cathodic protection anodes.
 - (6) Deviations from the sizes, locations, and other features of installations shown in the Contract Documents.
 - (7) Locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stub outs, invert elevations, etc.
 - (8) Sufficient information to locate Work concealed in each building with reasonable ease and accuracy. In some instances, this may be by dimension, in others, it may be in relation to the spaces in the building near which it was installed.
- B. Contractor shall provide additional drawings as necessary for clarification.
- C. Contractor shall provide reproducible record drawings, made from final Shop Drawings marked "No Exceptions Taken" or "Approved as Noted."

PART 3 - RECORD SPECIFICATIONS

3.01 GENERAL:

- A. Contractor shall mark each section legibly to record manufacturer, trade name, catalog number, and supplier of each Product and item of equipment installed.

PART 4 - MAINTENANCE OF RECORD DOCUMENTS

4.01 GENERAL

- A. Contractor shall store Record Documents apart from documents used for construction:
 - (1) Provide files and racks for storage of Record Documents.
 - (2) Maintain Record Documents in a clean, dry, legible condition and in good order.
- B. Do not use Record Documents for construction purposes.

END OF DOCUMENT

GENERAL COMMISSIONING REQUIREMENTS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Special Conditions and other Division 01 Specification Sections, apply to this Section.

OPR and BoD documentation prepared by Owner and Architect contains requirements that apply to this Section.

1.02 SUMMARY

- A. This Section includes general requirements that apply to implementation of commissioning without regard to systems, subsystems, and equipment being commissioned.

1.03 DEFINITIONS

- A. BoD: Basis of Design
- B. CxA: Commissioning Authority
- C. OPR: Owner's Project Requirements
- D. Systems, Subsystems, and Equipment: Where these terms are used together or separately, they shall mean "as-built" systems, subsystems, and equipment
- E. TAB: Testing, Adjusting, and Balancing

1.04 COMMISSIONING TEAM

- A. Members Appointed by Contractor(s): Individuals, each having authority to act on behalf of the entity he or she represents, explicitly organized to implement the commissioning process through coordinated actions. The commissioning team shall consist of, but not be limited to, representatives of Contractor, including Project superintendent and subcontractors, installers, suppliers, and specialists deemed appropriate by the CxA.

- B. Members Appointed by Owner:
 - 1. CxA: The designated person, company, or entity that plans, schedules, and coordinates the commissioning team to implement the commissioning process. Owner will engage the CxA under a separate contract.
 - 2. Representatives of the facility user and operation and maintenance personnel.
 - 3. Architect and engineering design professionals.

1.05 OWNER'S RESPONSIBILITIES

- A. Provide the OPR documentation to the CxA and Contractor for use in developing the commissioning plan; systems manual; operation and maintenance training plan; and testing plans and checklists.
- B. Assign operation and maintenance personnel and schedule them to participate in commissioning team activities including, but not limited to, the following:
 - 1. Coordination meetings.
 - 2. Training in operation and maintenance of systems, subsystems, and equipment.
 - 3. Testing meetings.
 - 4. Demonstration of operation of systems, subsystems, and equipment.
- C. Provide utility services required for the commissioning process.
- D. Provide the BoD documents, prepared by Architect and approved by Owner, to the CxA and Contractor for use in developing the commissioning plan, systems manual, and operation and maintenance training plan.

1.06 CONTRACTOR'S RESPONSIBILITIES

- A. Provide utility services required for the commissioning process.
- B. Each Contractor shall assign representatives with expertise and authority to act on behalf of the Contractor and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:
 - 1. Participate in design-and construction-phase coordination meetings.
 - 2. Participate in maintenance orientation and inspection.

3. Participate in operation and maintenance training sessions.
 4. Participate in final review at acceptance meeting.
 5. Certify that Work is complete, and systems are operational according to the Contract Documents, including calibration of instrumentation and controls.
 6. Evaluate performance deficiencies identified in test reports and, in collaboration with entity responsible for system and equipment installation, recommend corrective action.
 7. Review and approve final commissioning documentation.
- C. Subcontractors shall assign representatives with expertise and authority to act on behalf of subcontractors and schedule them to participate in and perform commissioning team activities including, but not limited to, the following:
1. Participate in design- and construction-phase coordination meetings.
 2. Participate in maintenance orientation and inspection.
 3. Participate in procedures meeting for testing.
 4. Participate in final review at acceptance meeting.
 5. Provide schedule for operation and maintenance data submittals, equipment startup, and testing to CxA for incorporation into the commissioning plan. Update schedule on a weekly basis throughout the construction period.
 6. Provide information to the CxA for developing construction-phase commissioning plan.
 7. Participate in training sessions for Owner's operation and maintenance personnel.
 8. Provide updated Project Record Documents to the CxA on a daily basis.
 9. Gather and submit operation and maintenance data for systems, subsystems, and equipment to the CxA, as specified in Division 1 Section "Operation and Maintenance Data."
 10. Provide technicians who are familiar with the construction and operation of installed systems and who shall develop specific test procedures and participate in testing of installed systems, subsystems, and equipment.

1.07 CxA'S RESPONSIBILITIES

- A. Organize and lead the commissioning team.
- B. Prepare a construction-phase commissioning plan. Collaborate with Contractor and with subcontractors to develop test and

inspection procedures. Include design changes and scheduled commissioning activities coordinated with overall Project schedule. Identify commissioning team member responsibilities, by name, firm, and trade specialty, for performance of each commissioning task.

- C. Review and comment on submittals from Contractor for compliance with the OPR, BoD, Contract Documents, and construction-phase commissioning plan. Review and comment on performance expectations of systems and equipment and interfaces between systems relating to the OPR and BoD.
- D. Convene commissioning team meetings for the purpose of coordination, communication, and conflict resolution; discuss progress of the commissioning processes. Responsibilities include arranging for facilities, preparing agenda and attendance lists, and notifying participants. The CxA shall prepare and distribute minutes to commissioning team members and attendees within five (5) workdays of the commissioning meeting.
- E. At the beginning of the construction phase, conduct an initial construction-phase coordination meeting for the purpose of reviewing the commissioning activities and establishing tentative schedules for operation and maintenance submittals; operation and maintenance training sessions; TAB Work; and Project completion.
- F. Observe and inspect construction and report progress and deficiencies. In addition to compliance with the OPR, BoD, and Contract Documents, inspect systems and equipment installation for adequate accessibility for maintenance and component replacement or repair.
- G. Prepare Project-specific test and inspection procedures and checklists.
- H. Schedule, direct, witness, and document tests, inspections, and systems startup.
- I. Compile test data, inspection reports, and certificates and include them in the systems manual and commissioning report.
- J. Certify date of acceptance and startup for each item of equipment for start of warranty periods.
- K. Review Project Record Documents for accuracy. Request

revisions from Contractor to achieve accuracy. Project Record Documents requirements are specified in Division 1 Section "Project Record Documents."

- L. Review and comment on operation and maintenance documentation and systems manual outline for compliance with the OPR, BoD, and Contract Documents. Operation and maintenance documentation requirements are specified in Division 1 Section "Operation and Maintenance Data."
- M. Prepare operation and maintenance training program and provide qualified instructors to conduct operation and maintenance training. Operation and maintenance training is specified in Division 1 Section "Demonstration and Training."
- N. Videotape and edit training sessions.
- O. Videotape construction progress including hidden shafts.
- P. Prepare commissioning reports.
- Q. Assemble the final commissioning documentation, including the commissioning report and Project Record Documents.

1.08 COMMISSIONING DOCUMENTATION

- A. Index of Commissioning Documents: CxA shall prepare an index to include storage location of each document.
- B. OPR: A written document, prepared by Owner, which details the functional requirements of Project and expectations of how it will be used and operated. This document includes Project and design goals, measurable performance criteria, budgets, schedules, success criteria, and supporting information.
- C. BoD Document: A document, prepared by Architect, that records concepts, calculations, decisions, and product selections used to meet the OPR and to satisfy applicable regulatory requirements, standards, and guidelines. The document includes both narrative descriptions and lists of individual items that support the design process.
- D. Commissioning Plan: A document, prepared by CxA, that outlines the schedule, allocation of resources, and documentation requirements of the commissioning process, and shall include, but is not limited to the following:

1. Plan for delivery and review of submittals, systems manuals, and other documents and reports. Identification of the relationship of these documents to other functions and a detailed description of submittals that are required to support the commissioning processes. Submittal dates shall include the latest date approved submittals must be received without adversely affecting commissioning plan.
 2. Description of the organization, layout, and content of commissioning documentation (including systems manual) and a detailed description of documents to be provided along with identification of responsible parties.
 3. Identification of systems and equipment to be commissioned.
 4. Description of schedules for testing procedures along with identification of parties involved in performing and verifying tests.
 5. Identification of items that must be completed before the next operation can proceed.
 6. Description of responsibilities of commissioning team members.
 7. Description of observations to be made.
 8. Description of requirements for operation and maintenance training, including required training materials.
 9. Description of expected performance for systems, subsystems, equipment, and controls.
 10. Schedule for commissioning activities with specific dates coordinated with overall construction schedule.
 11. Identification of installed systems, subsystems, and equipment, including design changes that occurred during the construction phase.
 12. Process and schedule for documenting changes on a continuous basis to appear in Project Record Documents.
 13. Process and schedule for completing prestart and startup checklists for systems, subsystems, and equipment to be verified and tested.
 14. Step-by-step procedures for testing systems, subsystems, and equipment with descriptions for methods of verifying relevant data, recording the results obtained, and listing parties involved in performing and verifying tests.
- E. Test Checklists: CxA, shall develop test checklists for each system, subsystem, or equipment including interfaces and interlocks, and include a separate entry, with space for comments, for each item to be tested. Prepare separate

checklists for each mode of operation and provide space to indicate whether the mode under test responded as required. Provide space for testing personnel to sign off on each checklist. Specific checklist content requirements are specified in Division 1 Section "HVAC Commissioning Requirements." Each checklist, regardless of system, subsystem, or equipment being tested, shall include, but not be limited to, the following:

1. Name and identification code of tested item.
2. Test number.
3. Time and date of test.
4. Indication of whether the record is for a first test or retest following correction of a problem or issue.
5. Dated signatures of the person performing test and of the witness, if applicable.
6. Individuals present for test.
7. Deficiencies.
8. Issue number, if any, generated as the result of test.

- F. Certificate of Readiness: Certificate of Readiness shall be signed by Contractor, Subcontractor(s), Installer(s), and CxA certifying that systems, subsystems, equipment, and associated controls are ready for testing. Completed test checklists signed by the responsible parties shall accompany this certificate.
- G. Test and Inspection Reports: CxA shall record test data, observations, and measurements on test checklists. Photographs, forms, and other means appropriate for the application shall be included with data. CxA shall compile test and inspection reports and test and inspection certificates and include them in systems manual and commissioning report.
- H. Corrective Action Documents: CxA shall document corrective action taken for systems and equipment that fail tests. Include required modifications to systems and equipment and revisions to test procedures, if any. Retest systems and equipment requiring corrective action and document retest results.
- I. Issues Log: CxA shall prepare and maintain an issues log that describes design, installation, and performance issues that are at variance with the OPR, BoD, and Contract Documents. Identify and track issues as they are encountered, documenting the status of unresolved and resolved issues.

1. Creating an Issues Log Entry:
 - a. Identify the issue with unique numeric or alphanumeric identifier by which the issue may be tracked.
 - b. Assign a descriptive title of the issue.
 - c. Identify date and time of the issue.
 - d. Identify test number of test being performed at the time of the observation, if applicable, for cross-reference.
 - e. Identify system, subsystem, and equipment to which the issue applies.
 - f. Identify location of system, subsystem, and equipment.
 - g. Include information that may be helpful in diagnosing or evaluating the issue.
 - h. Note recommended corrective action.
 - i. Identify commissioning team member responsible for corrective action.
 - j. Identify expected date of correction.
 - k. Identify person documenting the issue.

2. Documenting Issue Resolution:
 - a. Log date correction is completed, or the issue is resolved.
 - b. Describe corrective action or resolution taken. Include description of diagnostic steps taken to determine root cause of the issue, if any.
 - c. Identify changes to the OPR, BoD, or Contract Documents that may require action.
 - d. State that correction was completed, and system, subsystem, and equipment is ready for retest, if applicable.
 - e. Identify person(s) who corrected or resolved the issue.
 - f. Identify person(s) documenting the issue resolution.

3. Issues Log Report: On a periodic basis, but not less than for each commissioning team meeting, CxA shall prepare a written narrative for review of outstanding issues and a status update of the issues log. As a minimum, CxA shall include the following information in the issues log and expand it in the narrative:
 - a. Issue number and title.
 - b. Date of the identification of the issue.
 - c. Name of the commissioning team member assigned responsibility for resolution.

d. Expected date of correction.

- J. Commissioning Report: CxA shall document results of the commissioning process including unresolved issues and performance of systems, subsystems, and equipment. The commissioning report shall indicate whether systems, subsystems, and equipment have been completed and are performing according to the OPR, BoD, and Contract Documents. The commissioning report shall include, but is not limited to, the following:
1. Lists and explanations of substitutions; compromises; variances in the OPR, BoD, and Contract Documents; record of conditions; and, if appropriate, recommendations for resolution. This report shall be used to evaluate systems, subsystems, and equipment and shall serve as a future reference document during Owner occupancy and operation. It shall describe components and performance that exceed requirements of the OPR, BoD, and Contract Documents and those that do not meet requirements of the OPR, BoD, and Contract Documents. It may also include a recommendation for accepting or rejecting systems, subsystems, and equipment.
 2. OPR and BoD documentation.
 3. Commissioning plan.
 4. Testing plans and reports.
 5. Corrective modification documentation.
 6. Issues log.
 7. Completed test checklists.
 8. Listing of off-season test(s) not performed and a schedule for their completion.
- K. Systems Manual: CxA shall gather required information and compile systems manual. Systems manual shall include, but is not limited to, the following:
1. OPR and BoD, including system narratives, schematics, and changes made throughout the Project.
 2. Project Record Documents as specified in Division 1 Section "Project Record Documents."
 3. Final commissioning plan.
 4. Commissioning report.
 5. Operation and maintenance data as specified in Division 1 Section "Operation and Maintenance Data."

1.09 SUBMITTALS

- A. Commissioning Plan Prefinal Submittal: CxA shall submit two hard copies of prefinal commissioning plan. Deliver one copy to Contractor, one to Owner, and one to Architect. Present submittal in sufficient detail to evaluate data collection and arrangement process. One copy, with review comments, will be returned to the CxA for preparation of the final construction-phase commissioning plan.
- B. Commissioning Plan Final Submittal: CxA shall submit two hard copies and two sets of electronically formatted information of final commissioning plan. Deliver one hard copy and one set of discs to Owner, and one copy to Architect. The final submittal must address previous review comments. The final submittal shall include a copy of the prefinal submittal review comments along with a response to each item.
- C. Test Checklists and Report Forms: CxA shall submit sample checklists and forms to Contractor quality-control manager and subcontractors for review and comment. Submit two copies of each checklist and report form.
- D. Certificates of Readiness: CxA shall submit Certificates of Readiness.
- E. Test and Inspection Reports: CxA shall submit test and inspection reports.
- F. Corrective Action Documents: CxA shall submit corrective action documents.
- G. Prefinal Commissioning Report Submittal: CxA shall submit two hard copies of the prefinal commissioning report. Include a copy of the preliminary submittal review comments along with CxA's response to each item. CxA shall deliver one copy to Owner and one copy to Architect. One copy, with review comments, will be returned to the CxA for preparation of final submittal.
- H. Final Commissioning Report Submittal: CxA shall submit two hard copies and two sets of electronically formatted information of the final commissioning report. CxA shall deliver one hard copy and one set of discs to Owner, and one copy to Architect. The final submittal must address previous review comments and shall include a copy of the prefinal submittal review comments along with a response to each item.

1.10 QUALITY ASSURANCE

- A. Instructor Qualifications: Factory-authorized service representatives, experienced in training, operation, and maintenance procedures for installed systems, subsystems, and equipment.
- B. Test Equipment Calibration: Comply with test equipment manufacturer's calibration procedures and intervals. Recalibrate test instruments immediately whenever instruments have been repaired following damage or dropping. Affix calibration tags to test instruments. Instruments shall have been calibrated within six months prior to use.

1.11 COORDINATION

- A. Coordinating Meetings: CxA shall conduct monthly coordination meetings of the commissioning team to review progress on the commissioning plan, to discuss scheduling conflicts, and to discuss upcoming commissioning process activities.
- B. Pretesting Meetings: CxA shall conduct pretest meetings of the commissioning team to review startup reports, pretest inspection results, testing procedures, testing personnel and instrumentation requirements, and manufacturers' authorized service representative services for each system, subsystem, equipment, and component to be tested.
- C. Testing Coordination: CxA shall coordinate sequence of testing activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 - 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- D. Manufacturers' Field Services: CxA shall coordinate services of manufacturers' field services.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

1.1 OPERATION AND MAINTENANCE TRAINING REQUIREMENTS

A. Training Preparation Conference: Before operation and maintenance training, CxA shall convene a training preparation conference to include Owner's operation and maintenance personnel, Contractor, and subcontractors. In addition to requirements specified in Division 1 Section "Demonstration and Training," perform the following:

1. Review the OPR and BoD.
2. Review installed systems, subsystems, and equipment.
3. Review instructor qualifications.
4. Review instructional methods and procedures.
5. Review training module outlines and contents.
6. Review course materials (including operation and maintenance manuals).
7. Inspect and discuss locations and other facilities required for instruction.
8. Review and finalize training schedule and verify availability of educational materials, instructors, audiovisual equipment, and facilities needed to avoid delays.
9. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

B. Training Modules: Develop an instruction program that includes individual training modules for each system, subsystem, and equipment as specified in Division 1 Section "Demonstration and Training."

END OF DOCUMENT

BKF SPECIFICATIONS – Table of Contents

Section 31 00 00	Soil Dust Mitigation Specification (provided by Alameda County GSA)
Section 31 10 00	Site Clearing
Section 31 20 00	Earth Moving
Section 31 21 00	Utility Trenching and Backfill
Section 32 11 00	Pavement Base Course
Section 32 12 16	Asphalt Paving
Section 32 13 13	Concrete Pavement
Section 32 13 18	Cement and Concrete for Exterior Improvements Concrete Curbs and
Section 32 13 75	Gutters
Section 33 41 00	Storm Utility Drainage Piping
Section 33 46 00	Subdrainage

SECTION 31 00 00

SOIL DUST MITIGATION SPECIFICATION

PART 1 - GENERAL

1.1 SUMMARY

1.1.1 Scope of Work: The “Work” specified herein includes any construction-related soil disturbance work that has the potential to generate airborne dust particulate, as it relates to the exterior exercise equipment installation project at the Juvenile Justice Center south recreational lawn (located at 2500 Fairmont Drive, San Leandro, California).

1.1.2 Related Sections:

- A. Section 31 10 00, Site Clearing
- B. Section 31 20 00, Earth Moving
- C. Section 31 21 00, Utility Trenching and Backfill
- D. Section 32 11 00, Pavement Base Course
- E. Section 33 46 00, Subdrainage

1.1.3 Reference Document: A pre-renovation geological evaluation was conducted by ACC Environmental Consultants within the proposed project boundaries for the presence of ultramafic rock, serpentine and naturally-occurring asbestos (NOA). The geological evaluation report from ACC, dated October 19, 2023, is attached to this specification as Appendix A and shall be referenced.

PART 2 - EXECUTION

2.1 SOIL DUST MITIGATION WORK PRACTICES

2.1.1 The following soil dust mitigation work practices shall be implemented throughout the duration of the construction activities.

2.1.2 Work Practices:

2.1.2.1 At all times, the Contractor will employ work practices intended to maintain an orderly and safe workplace. This will include, but not be limited to controls necessary to prevent visible emissions from crossing the work area boundaries.

2.1.2.2 Construction vehicle speed at the work site must be limited to fifteen (15) miles per hour or less.

- 2.1.2.3 Prior to any ground disturbance, sufficient water must be applied to the area to be disturbed to prevent visible emissions from crossing the immediate work area.
- 2.1.2.4 Areas to be graded or excavated must be kept adequately wetted to prevent visible emissions from crossing the immediate area.
- 2.1.2.5 Storage piles must be kept adequately wetted, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.
- 2.1.2.6 Equipment must be washed down before moving from the work area or onto a paved public road.
- 2.1.2.7 Visible track-out on County or paved public roads must be cleared using wet sweeping or a HEPA filter equipped vacuum device on a daily basis before the end of the work shift.
- 2.1.2.8 All water run-off must be contained on-site and prevented from entering into storm drains.

END OF SECTION

ATTACHMENTS:

APPENDIX A – GEOLOGICAL EVALUATION REPORT (20 PAGES)

Alameda County General Services Agency
JJC Exterior Exercise Equipment
2500 Fairmont Drive
San Leandro, CA

Project # 21152

APPENDIX A
GEOLOGICAL EVALUATION
REPORT



October 19, 2023

Matthew Reed, CAC, CDPH I/A
Environmental Project Manager
Environmental Department-Capital Programs
Alameda County General Services Agency
1401 Lakeside Drive, Suite 800
Oakland, CA 94612

**Re: NOA Evaluation at Planned Exercise Equipment Area
Juvenile Justice Center
2500 Fairmont, Avenue
San Leandro, California
ACC Project 2062-226.01**

Dear Mr. Reed,

This report presents the geological evaluation of soils for naturally occurring asbestos (NOA) at the above-referenced property (the Site) conducted by ACC Environmental Consultants, Inc. (ACC) based on 17 CCR Section 93105(c) - Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying, and Surface Mining.

Soil sampling conducted during this evaluation was based on applicable portions of the April 28, 2017, California Air Resources Board *Test Method 435 Guidance Document and Appendices*.

The Site is shown on the attached Figure 1. The area of proposed soil disturbance at the Site (the Project Area) measures roughly 4,000 square feet in area and is shown on the attached Figures 1 and 2.

The current on-site facility was constructed during 2007. The Project Area is adjacent to a retaining wall and is underlain by approximately 10 or more feet of fill material based on as-built construction plans provided by the Client. The fill material was reportedly imported from off-site.

The Project Area is scheduled to be excavated to depths of approximately 4.0 feet below ground surface (bgs) for installation of exercise equipment footings and improvements to the storm water drain. Excavated soils will be redistributed to other areas of the property, re-used as

backfill, or off-hauled from the property.

Geologic Map Review

ACC reviewed the following geologic maps:

- *Geologic Map of the San Francisco-San Jose quadrangle, California, 1:250,000*, California Division of Mines and Geology (CDMG) (Appendix A);¹
- *Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California*, United States Geologic Survey (USGS) (Appendix B);² and
- California Department of Public Health (CDPH) data for areas of potential naturally occurring asbestos (NOA) and ultramafic rocks (Appendix C).

The CDMG map reviewed by ACC (Appendix A) indicates the Site is underlain by gabbro and diabase (Jgd) associated with coast range ophiolites.

The USGS map reviewed by ACC (Appendix B) indicates the Site is underlain by Jurassic-age gabbro (Jgb) associated with coast range ophiolites.

Gabbro and diabase are mafic intrusive igneous rocks that do not consist of naturally occurring asbestos.

The CDPH data reviewed by ACC (Appendix C) indicate a potential for naturally occurring asbestos and ultramafic rocks at the Site.

Sampling

On September 26, 2023, ACC advanced two soil borings for collection of representative soil samples. Soil boring locations are shown on the attached Figure 2. Soil borings were advanced via a steel hand auger decontaminated prior to advancing each boring using an Alconox solution.

At each boring location a soil sample was collected from approximately 1.0, 2.0, and 4.0 feet bgs. Soils retrieved in the barrel of the hand auger were placed into dedicated laboratory-supplied wide-mouth glass jars, labeled, and delivered to SGS Forensic Laboratories (California Environmental Laboratory Accreditation Program No. 1202) following chain-of-custody protocol.

Soil borings were backfilled to surface grade with soil cuttings.

¹ Wagner, D.L., Bortugno, E.J., and McJunkin, R.D., 1991, *Geologic map of the San Francisco-San Jose quadrangle, California, 1:250,000*: California Division of Mines and Geology, Regional Geologic Map RGM-5A, scale 1:250,000

² R.W. Graymer, 2000, *Geologic map and map database of the Oakland metropolitan area, Alameda, Contra Costa, and San Francisco Counties, California*: U.S. Geological Survey Miscellaneous Field Studies MF-2342, scale 1:50,000. (Available at <https://pubs.usgs.gov/mf/2000/2342/>.)

Soil samples were analyzed discretely for asbestos by California Air Resources Board 435 method (CARB435).

Asbestos was not detected in any of the collected samples. The laboratory reporting limit for all samples was 0.25% and no traces (“<0.25”) of asbestos were observed by the laboratory during CARB435 analyses. The laboratory report and chain-of-custody area attached as Appendix D.

Soil Description

Soils in the Project Area were indicative of imported fill material and consist of grayish-brown gravelly-silt extending to approximately six inches bgs underlain by grayish-brown silty-clay with varied concentrations of sand and gravel extending to the total explored depth of 4.0 ft bgs. Representative soils were observed by an on-staff California-licensed Professional Geologist (Ian Sutherland, PG#9196). Asbestos and ultramafic rocks were not observed.

Conclusions

Soils within the proposed project area consist of fill material used to raise the Site elevation at the location of the Project Area (which is adjacent to a retaining wall constructed during 2007). The source of the fill material can not be confirmed at this time but the fill material was reportedly hauled from off-site.

Soils to be disturbed during construction of the exercise equipment do not contain asbestos based on representative CARB435 analyses obtained by ACC. Ian Sutherland, PG#9196 did not observe visual indications of asbestos, serpentine, or ultramafic rocks within Project Area soils.



Recommendations

The work can be completed as a non-asbestos job and is not subject to California Code of Regulations (CCR) Title 8, Section 1529.

ACC recommends that dust mitigation controls be implemented for the proposed project based on Air Toxics Control Measure (ATCM) 93105: Asbestos Airborne Toxic Control Measures for Construction, Grading, Quarrying, and Surface Mining Operations. Alternatively, the County could contact the Bay Area Air Quality Management District (BAAQMD) and request an exemption to ATCM 93105 and applicable dust mitigation controls.

We appreciate the opportunity to assist you with this project. If you have any questions regarding this document please contact 510.773.0752 or isutherland@accenv.com.

Sincerely,
ACC ENVIRONMENTAL CONSULTANTS, INC.



Ian Sutherland, PG
Project Manager

Attachments:

Figure 1 – Site Map & Project Area

Figure 2 – Project Area & Soil Sampling Locations

Appendix A – California Division of Mines and Geology (CDMG) Geologic Data


Appendix B – United States Geologic Survey (USGS) Geologic Data

Appendix C – California Department of Public Health (CDPH) Geologic Data

Appendix D – Laboratory Report and Chain-of-Custody

FIGURES 1 & 2



 = PROJECT AREA



**SITE & PROJECT AREA
2500 FAIRMONT DRIVE
SAN LEANDRO,
CALIFORNIA**

APPROXIMATE SCALE (FEET)



PROJECT NUMBER:
2062-241.00

DATE: 10.6.2023

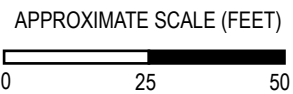
FIGURE 1

ALL DIMENSIONS & LOCATIONS APPROXIMATED



 = SOIL SAMPLING LOCATION

**PROJECT AREA & SAMPLING
LOCATIONS
2500 FAIRMONT DRIVE
SAN LEANDRO, CALIFORNIA**



PROJECT NUMBER:
2062-241.00

DATE: 10.6.2023

FIGURE 2

ALL DIMENSIONS & LOCATIONS APPROXIMATED

APPENDIX A

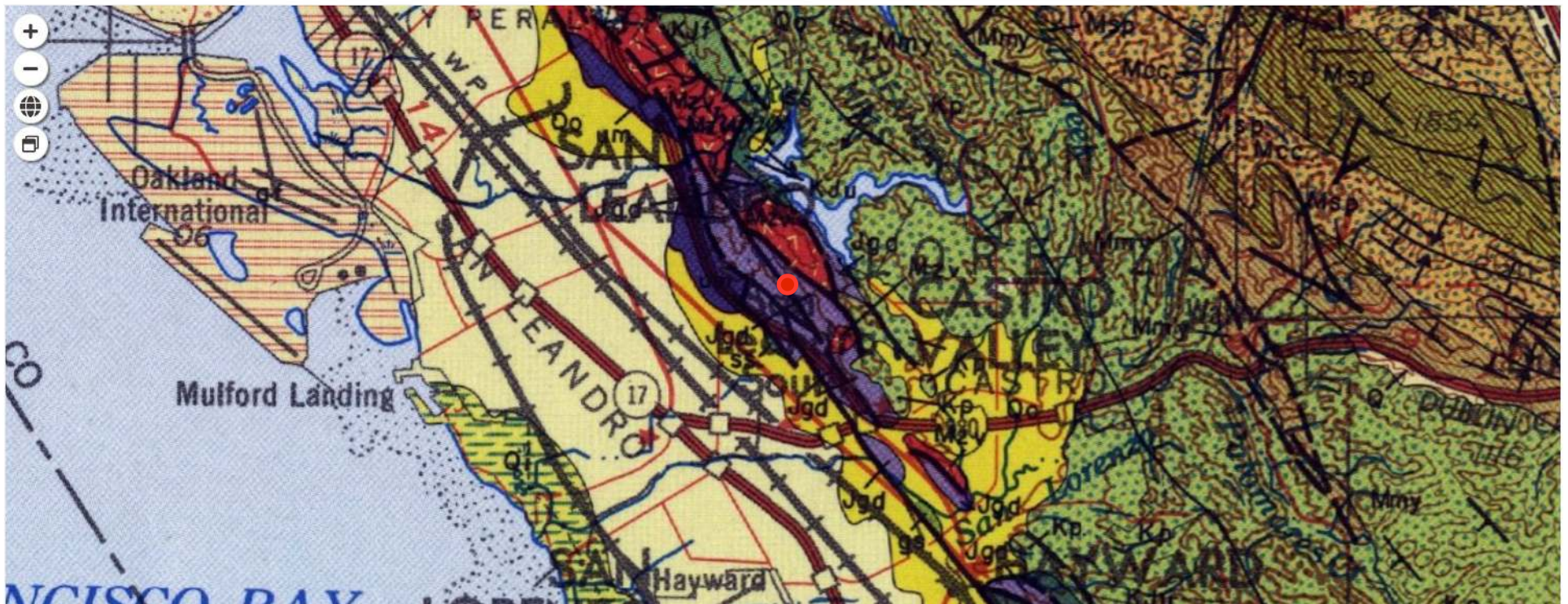
California Division of Mines and Geology (CDMG) Geologic Data

National Geologic Map Database

Preview

Wagner, D.L., Bortugno, E.J., and McJunkin, R.D., 1991, [Geologic map of the San Francisco-San Jose quadrangle, California, 1:250,000](#): California Division of Mines and Geology, Regional Geologic Map RGM-5A, scale 1:250,000

Image provided by California Geological Survey



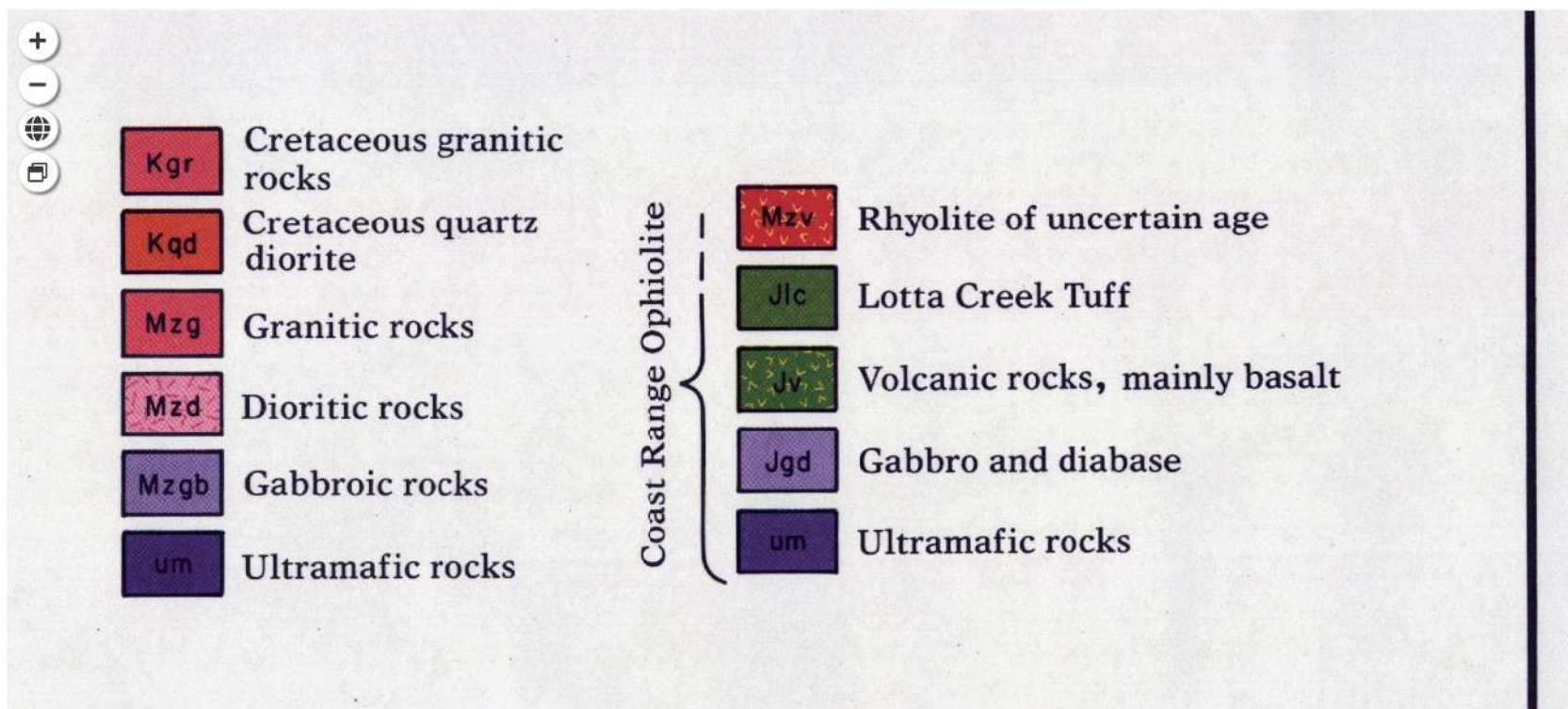
● = THE SITE

National Geologic Map Database

Preview

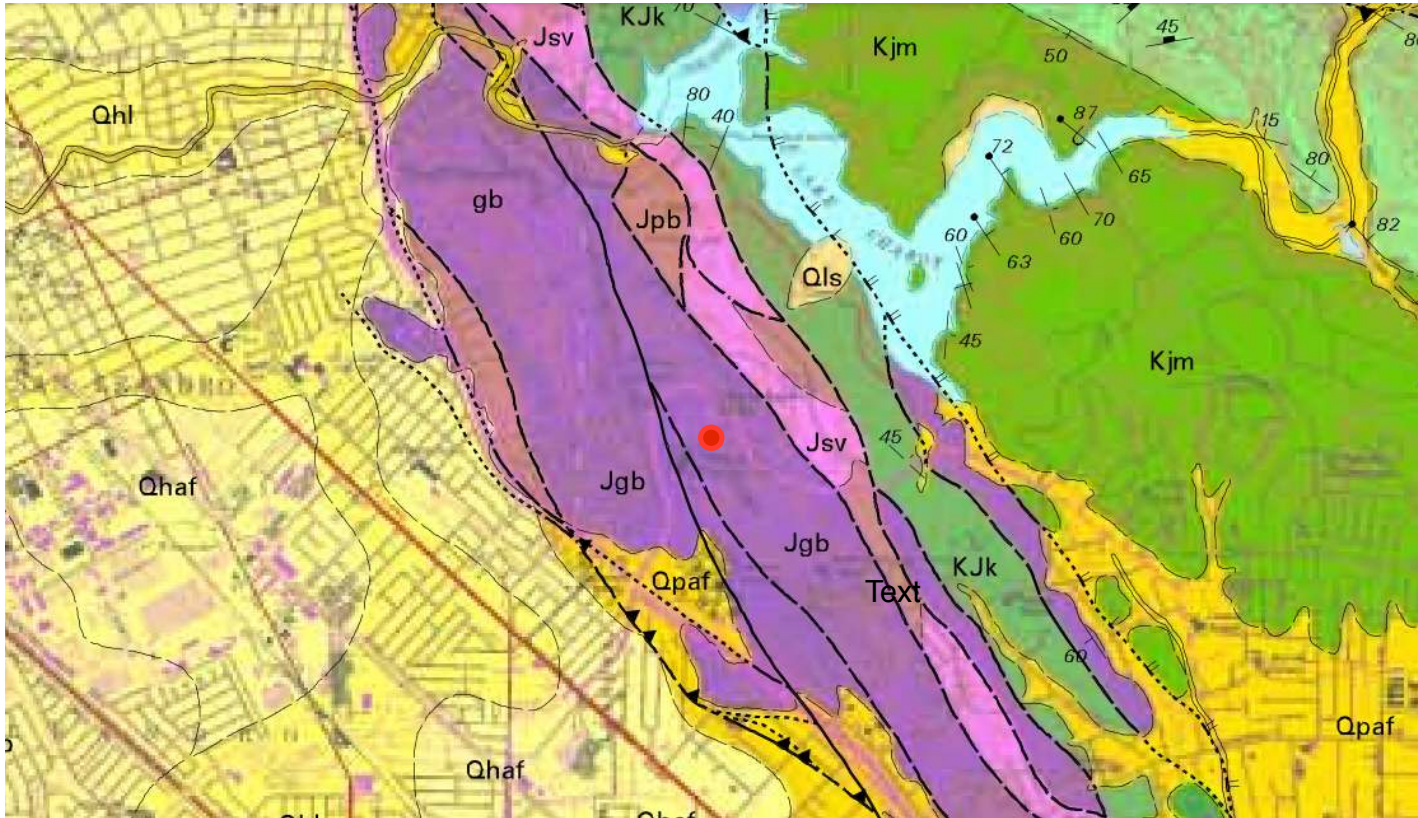
Wagner, D.L., Bortugno, E.J., and McJunkin, R.D., 1991, [Geologic map of the San Francisco-San Jose quadrangle, California, 1:250,000](#): California Division of Mines and Geology, Regional Geologic Map RGM-5A, scale 1:250,000

Image provided by [California Geological Survey](#)



APPENDIX B

United States Geologic Survey (USGS) Geologic Data



● = THE SITE

Kss	Unnamed lithic sandstone (Cretaceous)	KJk	Knoxville Formation (Early Cretaceous and Late Jurassic)
	Assemblage II	KJkc	Conglomerate
	Mullholland Formation of Ham (1952) (Pliocene and late Miocene)	KJkv	Volcanoclastic breccia
Tmlu	Upper member	Jsv	Keratophyre and quartz keratophyre (Late Jurassic)
Tmll	Lower member		Coast Range ophiolite (Jurassic)
Tmls	Sandstone marker beds	Jpb	Pillow basalt, basalt breccia, and minor diabase
Tus	Unnamed sedimentary and volcanic rocks (late Miocene)	Jb	Massive basalt and diabase
Tub	Interbedded basalt	Jgb	Gabbro
Tul	Interbedded limestone	sp	Serpentinite
Tlt	Lafayette Tuff (late Miocene)	sc	Silica-carbonate rock
Tn	Neroly Sandstone (late Miocene)	spm	Serpentinite matrix mélange
Tc	Cierbo Sandstone (late Miocene)		Franciscan Complex
Tbr	Briones Formation (late and middle Miocene)	KJf	Undivided Franciscan complex rocks (Cretaceous and Jurassic)
	In southern part of the assemblage, locally	Kfn	Sandstone of the Novato Quarry terrane (Blake and others (1984) (Late

GEOLOGIC MAP AND MAP DATABASE OF THE OAKLAND METROPOLITAN AREA, ALAMEDA, CONTRA COSTA, AND SAN FRANCISCO COUNTIES, CALIFORNIA

By
R.W. Graymer
2000

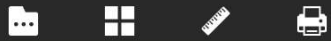
APPENDIX C

California Department of Public Health (CDPH) Geologic Data



Areas with potential for naturally occurring asbestos

Data sources, Disclaimers



About

How to use this map

How to use this map

Type in the address in the search box tool on the right side of the screen and press enter. You can also select the pin next to the search bar to drop a pin on the map.

Information about NOA

Information about Naturally Occurring Asbestos (NOA)

Naturally occurring asbestos (NOA) refers to the asbestos mineral as a natural component of soils or rocks.

Legend

Historic Asbestos Sites

- Mined
- Found

Search your address here

Search for an address or locate on map

2600 Fairmont Dr, San Leandro, CA

Show results within 500 Feet

0 5000

Ultramafic rock in outcrop

Approximate Distance: 0 ft

Ultramafic Rock

Rock type um

1mi

-122.077, 37.743 Degrees

California State Parks, Esri, HERE, Garmin, SafeGraph, GeoTec... **esri**

APPENDIX D

Laboratory Report and Chain-of-Custody

Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

ACC Environmental Consultants
Project Manager
7977 Capwell Dr., Suite 100

Oakland, CA 94621

Client ID: 1117
Report Number: N015749
Date Received: 09/26/23
Date Analyzed: 10/02/23
Date Printed: 10/02/23

Job ID/Site: 2062-226.01 - JJC NOA - 2500 Fairmont Drive San Leandro Ca

SGSFL Job ID: 1117
Total Samples Submitted: 6
Total Samples Analyzed: 6

PLM Report Number: N/A

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

B1-1`	12697424	Grey Soil
--------------	----------	------------------

Visual Estimation Results:

Matrix percentage of entire sample 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B1-2`	12697425	Grey Soil
--------------	----------	------------------

Visual Estimation Results:

Matrix percentage of entire sample 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B1-4`	12697426	Grey Soil
--------------	----------	------------------

Visual Estimation Results:

Matrix percentage of entire sample 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B2-1`	12697427	Grey Soil
--------------	----------	------------------

Visual Estimation Results:

Matrix percentage of entire sample 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

Bulk Asbestos Material Analysis

(Air Resources Board Method 435, June 6, 1991)

ACC Environmental Consultants
Project Manager
7977 Capwell Dr., Suite 100

Oakland, CA 94621

Client ID: 1117
Report Number: N015749
Date Received: 09/26/23
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Job ID/Site: 2062-226.01 - JJC NOA - 2500 Fairmont Drive San Leandro Ca

SGSFL Job ID: 1117
Total Samples Submitted: 6
Total Samples Analyzed: 6

PLM Report Number: N/A

Sample Preparation and Analysis:

Samples were analyzed by the Air Resources Board's Method 435, Determination of Asbestos Content of Serpentine Aggregate. Samples were ground to 200 particle size in the laboratory. Approximately 1 pint was retained for analysis. Samples were prepared for observation according to the guidelines of Exception I and Exception II as defined by the 435 Method. Samples which contained less than 10% asbestos were prepared for observation according to the point count technique as defined by the 435 Method. This analysis was performed with a standard cross-hair reticle.

Sample ID	Lab Number	Layer Description
-----------	------------	-------------------

B2-2`	12697428	Tan Soil
--------------	----------	-----------------

Visual Estimation Results:

Matrix percentage of entire sample 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.

B2-4`	12697429	Tan Soil
--------------	----------	-----------------

Visual Estimation Results:

Matrix percentage of entire sample 100

Visual estimation percentage: None Detected

Asbestos type(s) detected: None Detected

Comment: This result meets the requirements of Exception I as defined by the 435 Method.



Maria Casper, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification (LOQ) = 0.25%. Trace denotes the presence of asbestos below the LOQ. ND = None Detected.

Analytical results and reports are generated by SGS Forensic Laboratories (SGSFL) at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by SGSFL to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by SGSFL. The client is solely responsible for the use and interpretation of test results and reports requested from SGSFL. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. SGSFL is not able to assess the degree of hazard resulting from materials analyzed. SGS Forensic Laboratories reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

SECTION 31 10 00

SITE CLEARING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Removal of existing trees and vegetation
- B. Clearing vegetation, debris, trash and other materials within limits indicated
- C. Grubbing of vegetation within limits indicated
- D. Stripping of topsoil within limits indicated
- E. Removing above-grade site improvements within limits indicated
- F. Disconnecting, capping or sealing, and abandoning site utilities in place
- G. Disconnecting, capping or sealing, and removing site utilities
- H. Disposing of objectionable material

1.2 RELATED SECTIONS

- A. Section 31 00 00, Soil Dust Mitigation Specification
- B. Section 31 20 00, Earth Moving
- C. Section 32 12 16, Asphalt Paving
- D. Section 32 13 13, Concrete Pavement

1.3 RELATED DOCUMENTS

- A. ANSI A300: Industry Standards for Tree Care Practices
- B. Applicable Publications
 - 1. "Trees and Building Sites," official publication of the International Society of Arboriculture.
 - 2. "Arboriculture," the care of trees and shrubs by Dr. Richard Harris.

1.4 DEFINITIONS

- A. ANSI: American National Standards Institute
- B. CAL-OSHA: California Occupational Safety and Health Administration
- C. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of

brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.

1.5 SUBMITTALS

- A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.
- B. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

1.6 QUALITY ASSURANCE

- A. Do not remove or prune trees without first securing a permit from the appropriate agency.
- B. Prune to the standards of the International Society of Arborists and to ANSI A300.

1.7 PROJECT CONDITIONS

- A. Except for materials indicated to be stockpiled or to remain the Owner's property, cleared materials are the Contractor's property. Remove cleared materials from site and dispose of in lawful manner.
- B. Salvageable Improvements: Carefully remove items indicated to be salvaged and store where indicated on plans or where designated by the Owner's Representative. Avoid damaging materials designated for salvage.
- C. Unidentified Materials;
 - 1. If unidentified materials are discovered, including hazardous materials that will require additional removal other than is required by the Contract Documents, immediately report the discovery to the Owner's Representative.
 - 2. If necessary, the Owner's Representative will arrange for any testing or analysis of the discovered materials and will provide instructions regarding the removal and disposal of the unidentified materials.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. Backfill excavations resulting from demolition operations with on-site or import materials conforming to engineered fill defined in Section 31 20 00, Earth Moving.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Protect and maintain benchmarks and survey control points during construction.
- B. Locate and clearly flag trees and vegetation to remain or to be relocated.
- C. Protect existing site improvements to remain during construction.

3.2 TREE REMOVAL

- A. Remove trees designated for removal prior to the construction of new improvements in the vicinity:
 - 1. When demolishing trees indicated to be removed within areas for new pavement or hardscape, remove tree, stump to a depth of two (2) feet below finish grade, and all roots located in the top twelve (12) inches of soil. Remove wood chips created from grinding process down to remaining stump then refill void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Import soil and compaction in future paved areas shall be in accordance with Section 32 12 16, Asphalt Paving and Section 32 13 13, Concrete Pavement.
 - 2. When demolishing trees indicated to be removed within new landscaped areas, removal shall be done in one of the following ways:
 - a. For trees located in accessible areas, remove tree and grind stump to four (4) inches below finish grade. Backfill the void and re-compact to 80% relative compaction. Use import soil as indicated in specifications for this purpose. Do not remove existing roots.
 - b. For trees located in inaccessible areas, cut stump flush with finish grade, and cover with 3 inches of bark mulch. Do not grind the stump and do not remove existing roots.
- B. Perform tree removal work in a safe and proper manner, adhering to CAL-OSHA tree work protection standards and ANSI A300 Standards.
- C. All trees to be demolished shall be removed in such a way as to not damage branches, trunks, or root systems of adjacent trees.

3.3 RESTORATION

- A. Restore damaged improvements to their original condition, as acceptable to the Owner's Representative.

- B. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, as directed by the Owner's Representative.
 - 1. Employ a qualified arborist, licensed in jurisdiction where the Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.
 - 2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the Owner's Representative.

3.4 UTILITIES

- A. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed or abandoned.
- B. Arrange to shut off indicated utilities with utility companies or verify that utilities have been shut off.
- C. Existing Utilities: Do not interrupt utilities serving facilities occupied by Owner's Representative or others unless authorized in writing by the Owner's representative, and then only after arranging to provide temporary utility services according to requirements indicated.
- D. Coordinate utility interruptions with utility company affected.
- E. Do not proceed with utility interruptions without the permission of the Owner's Representative and utility company affected. Notify Owner's Representative and utility company affected two working days prior to utility interruptions.
- F. Excavate and remove underground utilities that are indicated to be removed.
- G. Fill abandoned piping with cement slurry.
- H. Securely close ends of abandoned piping with tight fitting plug or cement slurry minimum 6 inches thick.

3.5 CLEARING AND GRUBBING

- A. Areas to be graded shall be cleared of existing vegetation, rubbish, existing structures, and debris.
- B. Remove obstructions, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
- C. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
- D. Use only hand methods for grubbing within drip line of remaining trees.

3.6 SITE STRIPPING

- A. Strippings and spoils shall be disposed at an off-site location, per geotechnical recommendations.
- B. Remove vegetation before stripping soil.
- C. Surface soils that contain organic matter should be stripped. In general, the depth of required stripping will be relatively shallow (i.e. less than 2 inches); deeper stripping and grubbing may be required to remove isolated concentrations of organic matter or roots.
- D. Remove trash, debris, weeds, roots, and other waste materials.
- E. Stockpile soil materials designated to remain on site at a location approved by the Owner's Representative at a location away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent windblown dust.
- F. Do not stockpile soil within drip line of remaining trees.

3.7 SITE IMPROVEMENTS

- A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

3.8 BACKFILL

- A. Place and compact material in excavations and depressions remaining after site clearing in accordance with Section 31 20 00, Earth Moving.

3.9 DISPOSAL

- A. Remove surplus soil material, unsuitable soil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off the Owner's property.

END OF SECTION

SECTION 31 20 00

EARTH MOVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Excavation and/or embankment from existing ground to subgrade, including soil sterilant, for roadways, driveways, parking areas, building pads, walks, paths, or trails and any other site improvements called for on the Plans.

1.2 SECTION EXCLUDES

- A. Earthwork related to underground utility installation shall be performed in accordance with Sections 31 21 00, Utility Trenching and Backfill.

1.3 RELATED SECTIONS

- A. Section 31 10 00, Site Clearing
- B. Section 33 46 00, Subdrainage

1.4 RELATED DOCUMENTS

- A. ASTM
 - 1. D1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
 - 2. D1586, Method for Penetration Tests and Split-Barrel Sampling of Soils
 - 3. D2487, Classification of Soils for Engineering Purposes
 - 4. D3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
 - 5. D4318. Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils
 - 6. E329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
 - 7. E548, Guide for General Criteria Used for Evaluating Laboratory Competence
- B. California Building Code, California Code of Regulations, Title 24, Part 2, Chapter 18, Soils and Foundations, and Chapter 33, Safeguards During Construction
- C. Caltrans Standard Specifications, 2015
 - 1. Section 17, General
 - 2. Section 19, Earthwork

- D. CAL/OSHA, Title 8.

1.5 DEFINITIONS

- A. Borrow: Approved soil material imported from off-site for use as Structural Fill or Backfill.
- B. Excavation: Removal of material encountered above subgrade elevations.
 - 1. Authorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions as shown on plans or authorized by the Geotechnical Engineer.
 - 2. Unauthorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.
- C. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.
- D. Structural Backfill: Soil materials approved by the Geotechnical Engineer and used to fill excavations resulting from removal of existing below grade facilities, including trees.
- E. Structural Fill: Soil materials approved by the Geotechnical Engineer and used to raise existing grades.
- F. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material $\frac{3}{4}$ cubic yards or more in volume that when tested by an independent geotechnical testing agency, according to ASTM D1586, exceeds a standard penetration resistance of 100 blows/2 inches.
- G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below grade.
- H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials.
- I. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches in diameter; and free of weeds, roots, and other deleterious materials.
- J. Unsuitable Material: Any soil material that is not suitable for a specific use on the Project. The Geotechnical Engineer will determine if a soil material is unsuitable.

- K. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.
- L. Utilities: onsite underground pipes, conduits, ducts and cables.

1.6 SUBMITTALS

- A. Material Test Reports: Provide, from a qualified testing agency, the following test results showing compliance with the project requirements:
- B. Classification according to ASTM D2487 of each onsite or borrow soil material proposed for fill and backfill.
 - 1. Laboratory compaction curve in conformance with ASTM D1557 for each onsite or borrow soil material proposed for fill and backfill.

1.7 QUALITY ASSURANCE

- A. Provide an independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.
- B. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.
- C. Conform all work in accordance with Caltrans Standard Specification Section 17, General and Section 19, Earthwork.
- D. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D1557.
- E. Perform excavation, filling, compaction and related earthwork under the observation of the Geotechnical Engineer. Materials placed without approval of the Geotechnical Engineer will be presumed to be defective and, at the discretion of the Geotechnical Engineer, shall be removed and replaced at no cost to the Owner. Notify the Geotechnical Engineer at least 7 to 10 days prior to commencement of earthwork and at least 48 hours prior to testing.
- F. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the Project earthwork. Correct earthwork that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.
- G. Upon completion of the construction work, certify that all compacted fills and foundations are in place at the correct locations, and have been constructed in accordance with sound construction practice. In addition, certify that the

materials used are of the types, quality and quantity required by these Technical Specifications and the Geotechnical Report. The Contractor shall be responsible for the stability of all fills and backfills constructed by his forces and shall replace portions that in the opinion of the Geotechnical Engineer have been displaced or are otherwise unsatisfactory due to the Contractor's operations.

- H. Finish subgrade tolerance at completion of grading:
1. Building and paved areas: ± 0.05 feet
 2. Other areas: ± 0.10 feet

1.8 PROJECT CONDITIONS

- A. Promptly notify the Owner's Representative of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner's Representative verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless the Contractor has notified the Owner's Representative in writing of differing conditions prior to the Contractor starting work on affected items.
- B. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.
- C. Temporarily stock-pile fill material in an orderly and safe manner and in a location approved by the Owner's Representative.
- D. Environmental Requirements: When unfavorable weather conditions necessitate interrupting earthwork operation, areas shall be prepared by compaction of surface and grading to avoid collection of water. Provide adequate temporary drainage to prevent erosion. After interruption, compaction specified in last layer shall be re-established before resuming work.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

- A. General: On-site soils are considered suitable for use as fill provided the materials are placed in accordance with Geotechnical Recommendations. Highly expansive soils shall not be used as select structural fill, or used as backfill for trenches located within hardscape areas.
- B. Imported fill soils, if required, should be predominantly granular in nature, and should be free of organics, debris, or rocks over 3 inches in size, and shall be approved by the Geotechnical Engineer before importing to the site. Imported non-expansive soils shall have a Plasticity Index less than 15 as determined by ASTM D4318, an R-value of at least 20, and fines content between 15 and

65 percent. Import fill shall be considered non-hazardous per Department of Toxic Substances Control guidelines (DTSC, 2017) and non-corrosive per Caltrans Corrosion Guidelines (Caltrans, 2015).

2.2 SOIL STERILANT

- A. Commercial chemical for weed control, registered by EPA. Provide granular, liquid or wet-able powder form.

PART 3 - EXECUTION

3.1 GENERAL

- A. Perform work in accordance with Caltrans Standard Specification Section 19, Earthwork, as modified by the Contract Documents.
- B. Placement and compaction of material by flooding, ponding, or jetting will not be permitted.
- C. The use of explosives will not be permitted.
- D. Grading and earthwork operations shall be observed and tested by a representative of the Geotechnical Engineer for conformance with the project plans/specifications and the geotechnical recommendations. This work includes site preparation, selection of satisfactory materials, and placement and compaction of the subgrades and fills. Sufficient notification prior to commencement of earthwork is essential to make certain that the work will be properly observed.

3.2 CONTROL OF WATER AND DEWATERING

- ~~A. Comply with Section 31-23-19, Dewatering, if dewatering is necessary.~~
- B. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding the site and surrounding area. Provide dewatering equipment necessary to drain and keep excavations and site free from water.
- ~~C. Dewater during backfilling operation so that groundwater is maintained a least 1 foot below level of compaction effort.~~
- ~~D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.~~
- ~~E. Protect subgrades from softening, undermining, washout and damage by rain or water accumulation.~~
- ~~F. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations.~~

- G. Maintain dewatering system in place until dewatering is no longer required.

3.3 WET WEATHER CONDITIONS

- A. Do not prepare subgrade, place or compact soil materials if subgrade or materials are above optimum moisture content, unless approved by Geotechnical Engineer and project compaction requirements can be met.
- B. If the Geotechnical Engineer allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Engineer.

3.4 BRACING AND SHORING

- A. Conform to California OSHA requirements.
- B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.
- C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.
- D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.5 TOPSOIL STRIPPING

- A. Remove topsoil in accordance with Section 31 10 00, Site Clearing.

3.6 EXCAVATION

- A. Excavate earth and rock to lines and grades shown on plans and to the neat dimensions indicated on the plans, required herein or as required to satisfactorily compact backfill.
- B. Remove and dispose of large rocks, pieces of concrete and other obstructions encountered during excavation.

- C. Excavation through buried concrete and other unknown obstructions will require specialized techniques for demolition and removal.
- D. Where forming is required, excavate only as much material as necessary to permit placing and removing forms.
- E. Provide supports, shoring and sheet piles required to support the sides of excavations or for protection of adjacent existing improvements.

3.7 GRADING

- A. Uniformly grade the Project to the elevations shown on plans
- B. Finish ditches, gutters and swales to the sections, lines and grades indicated and to permit proper surface drainage.
- C. Round tops and bottoms of slopes as indicated or to blend with existing contours.

3.8 SUBGRADE PREPARATION

- A. Subgrade Preparation: Prior to backfilling depressions created by the removal of old foundations and utility lines, scarify the bottom of the excavation to an approximate depth of 8 inches and uniformly moisture condition the scarified surfaces to a moisture content that is at least 2 percent over optimum. Compact the scarified surfaces to a minimum of 90 percent relative compaction at above optimum moisture content.
- B. Over-excavate any remaining soft (pumping) areas down to firm soil and backfill the area.
- C. Subgrade shall be maintained in a moist, but not wet, condition by periodically sprinkling water prior to the placement of additional fill or installation of roads. Subgrade that has been permitted to dry out and loosen or develop desiccation cracking should be scarified, moisture conditioned, and re-compacted as recommended above.
- D. Install underground utilities and service connections prior to final preparation of subgrade and placement of base materials for final surface facilities. Extend services so that final surface facilities are not disturbed when service connections are made.
- E. Prepare subgrades under the structural section of paved areas, curbs, gutters, walks, structures, other surface facilities and areas to receive structural fill.
- F. Protect utilities from damage during compaction of subgrades and until placement of final pavements or other surface facilities.

- G. Obtain the Geotechnical Engineer's approval of subgrades prior to placing pavement structural section.

3.9 KEYWAYS AND BENCHES

- A. Provide keyways as indicated for fill slopes steeper than 6 horizontal to 1 vertical. Extend keyway 5 feet minimum into competent, undisturbed soil or 3 feet minimum into competent, undisturbed rock as directed by the Geotechnical Engineer.
- B. Place subsurface drains in bottom of keyway in accordance with Section 33 46 00, Subdrainage.
- C. Bench subgrade as indicated above toe of fill.
- D. Place subsurface drains at benches every 20 vertical feet or as directed by the Geotechnical Engineer.

3.10 LOT FINISH GRADING

- A. Blade finish lots to lines and grades indicated.

3.11 FILL PLACEMENT AND COMPACTION

- A. Place fill in uniformly moisture conditioned and compacted lifts not exceeding 8 inches in loose thickness. Each lift should be thoroughly moisture conditioned and compacted to 90 percent before successive fill layers are placed.
- B. In order to achieve satisfactory compaction in the subgrade and fill soils, it may be necessary to adjust the soil moisture content at the time of soil compaction per geotechnical recommendations. This may require that water be added and thoroughly mixed into any soils which are too dry or that scarification and aeration be performed in any soils which are too wet.
- C. Obtain the Geotechnical Engineer's approval of surface to receive structural fill prior to placement of structural fill material.
- D. Place structural fill on prepared subgrade.
- E. Do not drop fill on structures. Do not backfill around, against or upon concrete or masonry structures until structure has attained sufficient strength to withstand loads imposed and the horizontal structural system had been installed.
- F. Do not compact by ponding, flooding or jetting.
- G. Perform compaction using rollers, pneumatic or vibratory compactors or other equipment and mechanical methods approved by the Geotechnical Engineer.

- H. Compaction requirements with moisture content at least 2 percent over optimum (unless specified otherwise by the Geotechnical Engineer):
 - 1. Compact structural fills less than 5 feet thick to 90 percent compaction.
 - 2. Compact structural fill 5 feet thick or greater to 95 percent compaction.
 - 3. Compact the upper 6 inches of subgrade soils beneath pavements, curbs and gutters to 95 percent compaction. Extend compaction 5 feet beyond pavement edges unless specified otherwise by the Geotechnical Engineer.
 - 4. Compact the upper 6 inches of subgrade soils under walks, structures and areas to receive structural fill to 90 percent compaction.

3.12 SOIL STERILIZATION

- A. Apply soil sterilant to areas indicated, such as beneath asphalt concrete pavement, brick pavement, concrete pavement and at grade concrete slabs, including sidewalks, curbs and gutters. Also where indicated apply soil sterilant below expansion and control joints and at areas where pipes, ducts or other features penetrate slabs.
- B. Apply soil sterilant uniformly and at the rates recommended by the manufacturer.
- C. Apply soil sterilant to prepared subgrade, or after installation of aggregate base as recommended by the manufacturer.

3.13 DISPOSAL

- A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

END OF SECTION

SECTION 31 21 00

UTILITY TRENCHING AND BACKFILL

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Excavation, bedding, and backfill for underground storm drain, sanitary sewer, and water piping, underground HVAC piping, electrical conduit, telephone conduit, gas piping, cable TV conduit, etc., and associated structures.
- B. Provide labor, material, equipment, and services necessary to complete the backfilling and compacting as necessary for this project. Section includes, but is not limited to:
 - 1. Select Backfill Material
 - 2. Aggregate Base
 - 3. Detectable Tape
 - 4. Trench Excavation
 - 5. Pipe Bedding
 - 6. Trench Backfill
 - 7. Trench Surfacing
- C. This section excludes drainage fill material and placement around subdrains. See Section 33 46 00 – Subdrainage.

1.2 RELATED SECTIONS

- A. Section 31 10 00 – Site Clearing
- B. Section 31 20 00 – Earthwork Moving
- C. Section 33 41 00 – Storm Utility Drainage Piping
- D. Section 33 46 00 – Subdrainage

1.3 RELATED DOCUMENTS

- A. ASTM
 - 1. D1557, Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
 - 2. D2321, Standard Practice for Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications.
- B. California Administrative Code, Title 24, Part 2 - Basic Building Regulations, Chapter 24, Excavations, Foundations, and Retaining Walls.
- C. Caltrans Standard Specifications, 2015

1. Section 19, Earthwork
2. Section 26, Aggregate Bases
3. Section 68, Subsurface Drains
4. Section 96, Geosynthetics

D. CAL/OSHA, Title 8

1.4 DEFINITIONS

- A. AC: Asphalt Concrete
- B. ASTM: American Society for Testing and Materials
- C. Base: The layer placed between the subgrade and surface pavement in a paving system.
- D. Bedding: Material from bottom of trench to bottom of pipe
- E. CDF: Controlled Density Fill
- F. DIP: Ductile Iron Pipe
- G. Engineered Fill:
1. Soil or soil-rock material approved by the Owner and transported to the site by the Contractor in order to raise grades or to backfill excavations.
 2. Contractor shall provide sufficient tests, and a written statement that all materials brought onto the project site comply with specification requirements.
- H. Excavation: Consists of the removal of material encountered to subgrade elevations
- I. Initial Backfill: Material from bottom of pipe to 12 inches above top of pipe
- J. PCC: Portland Cement Concrete
- K. RCP: Reinforced Concrete Pipe
- L. Relative Compaction: In-place dry density of soil expressed as percentage of maximum dry density of same materials, as determined by laboratory test procedure ASTM D1557.
- M. Springline of Pipe: Imaginary line on surface of pipe at a vertical distance of $\frac{1}{2}$ the outside diameter measured from the top or bottom of the pipe.
- N. Subgrade: The uppermost surface of an excavation or the top surface of a fill or backfill immediately below base.

- O. Subsequent Backfill: Material from 12 inches above top of pipe to subgrade of surface material or subgrade of surface facility or to finish grade.
- P. Trench Excavation: Removal of material encountered above subgrade elevations and within horizontal trench dimensions.
 - 1. Authorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions as shown on plans or authorized by the Geotechnical Engineer.
 - 2. Unauthorized Trench Over-Excavation: Excavation below trench subgrade elevations or beyond indicated horizontal trench dimensions without authorization by the Geotechnical Engineer. Unauthorized excavation shall be without additional compensation.
- Q. Utility Structures:
 - 1. Storm drainage manholes, catch basins, drop inlets, curb inlets, vaults, etc.
 - 2. Sanitary sewer manholes, vaults, etc.
 - 3. Water vaults, etc.

1.5 SUBMITTALS

- A. Test Reports: Submit the following report for import material directly to the Owner from the Contractor's testing services:
 - 1. Compaction test reports for aggregate base.
- B. Samples:
 - 1. If required by the Geotechnical Engineer, provide 20-pound samples of all imported trench bedding and backfill material sealed in airtight containers, tagged with source locations and suppliers of each proposed material. Do not import materials to Project without written approval of the Geotechnical Engineer and the Owner.
 - 2. Provide materials from same source throughout work. Change of source requires approval of the Geotechnical Engineer and the Owner.

1.6 QUALITY ASSURANCE

- A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.
- B. Conform all work to the appropriate portion(s) of the Caltrans Standard Specifications, Section 19, Earthwork.
- C. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D 1557.
- D. The Geotechnical Engineer will perform observations and tests required to enable him to form an opinion of the acceptability of the trench backfill. Correct

the trench backfill that, in the opinion of the Geotechnical Engineer, does not meet the requirements of these Technical Specifications and the Geotechnical Report.

1.7 PROJECT CONDITIONS

- A. Promptly notify the Owner of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless Contractor has notified the Owner in writing of differing conditions prior to contractor starting work on affected items.
- B. Barricade open excavations and post with warning lights.
 - 1. Operate warning lights and barricades as required.
 - 2. Protect structures, utilities, sidewalks, pavements, and other facilities immediately adjacent to excavations, from damages caused by settlement, lateral movement, undermining, washout, and other hazards.
 - 3. Protect open, trenches, and utility structure excavations with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.
- C. Stockpile on-site and imported backfill material temporarily in an orderly and safe manner.
- D. Provide dust and noise control in conformance with Section 01 10 00 Supplemental General Requirements.
- E. Environmental Requirements:
 - 1. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the District.
 - 2. Protect existing streams, ditches and storm drain inlets during work on this project.
- F. Protection of Subgrade: Do not allow equipment to pump or rut subgrade, stripped areas, footing excavations, or other areas prepared for project.
- G. Transport all excess soils materials by legally approved methods to disposal areas.
 - 1. Coordinate with the Engineer.
 - 2. Any additional fill requirements shall be the responsibility of the Contractor.

1.8 EXISTING UTILITIES

- A. Locate existing underground utilities in the areas of work. For utilities that are to remain in place, provide adequate means of protection during excavation operations.
 - 1. Locating of existing underground utilities shall include but not be limited to pot-holing prior to the start of construction.
- B. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, consult Owner and/or utility agency immediately for directions.
 - 1. Cooperate with the Owner and public and private utility companies in keeping their respective services and facilities in operation.
 - 2. Repair damaged utilities to the satisfaction of the agency with jurisdiction.
- C. Do not interrupt existing utilities serving facilities occupied and used by the Owner or others, except when permitted in writing by the Owner and then only after acceptable temporary utility services have been provided.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Import materials will be subject to approval of the Geotechnical Engineer.
- B. For approval of imported fill material, notify the Owner at least 7 days in advance of intention to import material.

2.2 PIPE BEDDING AND INITIAL BACKFILL

- A. ASTM D2321, Class IA, IB or II.
 - 1. Clean and free of clay, silt or organic matter.
- B. Permeable Material: In accordance with Section 68-2.02F of Caltrans Standard Specifications, Class 1, Type A or Class 2.
- C. Class 2 Aggregate Base: In accordance with Section 26 of Caltrans Standard Specifications, $\frac{3}{4}$ inch maximum.
- D. Sand: In accordance with Section 19-3.02F of Caltrans Standard Specifications.

2.3 SELECT BACKFILL

- A. Select backfill material shall be gravel, free of clay or organic matter and shall conform to the following gradation:

Sieve Size	Percentage Passing
1 inch	100
¾ inch	90 – 100
No. 4	35 – 60
No. 200	2 - 9

- B. For gas pipe and fuel piping select backfill shall be clean, graded building sand conforming to the following gradation:

Sieve Size	Percentage Passing
No. 4	100
No. 200	0 -5

2.4 WARNING TAPE

- A. Polyethylene plastic and metallic core or metallic-faced, acid- and alkali-resistant, polyethylene plastic warning tape manufactured specifically for warning and identification of buried utility lines. Provide tape on rolls, 3 inch minimum width, color coded as specified below for the intended utility with warning and identification imprinted in bold black letters continuously over the entire tape length. Warning and identification to read, "CAUTION, BURIED (intended service) LINE BELOW" or similar wording. Color and printing shall be permanent, unaffected by moisture or soil.
1. Warning Tape Color Codes
 - a. Red: Electric
 - b. Yellow: Gas, Oil; Dangerous Materials
 - c. Orange: Telephone and Other Communications
 - d. Blue: Water Systems
 - e. Green: Sewer Systems
 - f. White: Steam Systems
 - g. Gray: Compressed Air
 2. Warning Tape for Metallic Piping: Acid and alkali-resistant polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of tape shall be 0.003 inch. Tape shall have a minimum strength of 1500 psi lengthwise, and 1250 psi crosswise, with a maximum 350 percent elongation.
 3. Detectable Warning Tape for Non-Metallic Piping: Polyethylene plastic tape conforming to the width, color, and printing requirements specified above. Minimum thickness of the tape shall be 0.004 inch. Tape shall have a minimum strength of 1500 psi lengthwise and 1250 psi crosswise. Tape shall be manufactured with integral wires, foil backing, or other means of enabling detection by a metal detector when tape is buried up to 3 feet deep. Encase metallic element of the tape in a protective jacket or provide with other means of corrosion protection.

2.5 DETECTION WIRE FOR NON-METALLIC PIPING

- A. Detection wire shall be insulated single strand, solid copper with a minimum of 12 AWG.

2.6 SUBSEQUENT BACKFILL

- A. Conform to on-site or imported structural backfill in Section 31 20 00, Earth Moving.

2.7 CONTROLLED DENSITY FILL (CDF) (IN TRENCHES)

- A. Provide non-structural CDF, from bottom of trench to finish subgrade of subbase or base material, that can be excavated by hand and produce unconfined compressive 28-day strengths from 50-psi to a maximum of 150-psi. Provide aggregate no larger than 3/8 inch top size. The 3/8 inch aggregate shall not comprise more than 30% of the total aggregate content.
- B. Cement: Conform to the standards as set forth in ASTM C150, Type II Cement.
- C. Fly Ash: Conform to the standards as set forth in ASTM C618, for Class F pozzolan. Do not inhibit the entrainment of air with the fly ash.
- D. Air Entraining Agent: Conform to the standards as set forth in ASTM C260.
- E. Aggregates need not meet the standards as set forth in ASTM C33. Any aggregate, producing performances characteristics described herein will be accepted for consideration. The amount of material passing a #200 sieve shall not exceed 12% and no plastic fines shall be present.
- F. Provide CDF that is a mixture of cement, Class F pozzolan, aggregate, air entraining agent and water. CDF shall be batched by a ready mixed concrete plant and delivered to the job site by means of transit mixing trucks.
- G. The Contractor shall determine the actual mix proportions of the controlled density fill to meet job site conditions, minimum and maximum strengths, and unit weight. Entrained air content shall be a minimum of 4.0%. The actual entrained air content shall be established for each job with the materials and aggregates to be used to meet the placing and unit weight requirements. Entrained air content may be as high as 20% for fluidity requirements.
- H. Mix design shall meet the Geotechnical Engineer's approval.

2.8 CONCRETE STRUCTURE BEDDING AND BACKFILL

- A. Precast Structures: Same materials to the same heights as specified for pipe bedding and backfill, or other material approved by the Geotechnical Engineer.
- B. Poured-in-Place Structures:
 - 1. Bedding: Bedding shall meet the approval of the Geotechnical Engineer. In general, bedding is not required, pour bases against undisturbed native earth in cut areas and against engineered fill compacted to 90% relative compaction in embankment areas.

2. Side Backfill: On-site or imported structural fill meeting the requirements given in Section 31 20 00, Earth Moving.

2.9 GEOSYNTHETICS

- A. Filter Fabric:
 1. Filter Fabric: Section 96-1.02 of Caltrans Standard Specifications.
 2. Mirafi 140N, Mirafi Inc., or approved equal.

PART 3 - EXECUTION

3.1 GENERAL

- A. Comply with the recommendations of the Geotechnical Engineer.
- B. Protect existing trees to remain. No grading is permitted under the drip line of protected trees.
- C. Excavations for appurtenant structures, such as, but not limited to, manholes, transition structures, junction structure, vaults, valve boxes, catch basins, thrust blocks, and boring pits, shall be deemed to be in the category of trench excavation.
- D. Unless otherwise indicated in the Plans, all excavation for pipelines shall be open cut.
- E. Prior to commencement of work, become thoroughly familiar with site conditions.
- F. In the event discrepancies are found, immediately notify the Owner in writing, indicating the nature and extent of differing conditions.
- G. Backfill excavations as promptly as work permits.
- H. Do not place engineered fill or backfill until rubbish and deleterious materials have been removed and areas have been approved by the Owner.
- I. Place acceptable soil material in layers to required subgrade elevations, for each area classification listed below.
- J. In excavations, use satisfactory excavated or borrow material.
- K. Under grassed areas, use satisfactory excavated or borrow material.

3.2 SITE PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, which are to remain, from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earthwork operations.

- B. Protect existing storm drainage system from silt and debris resulting from construction activities. If contamination occurs, remove contamination at no cost to the Owner.

3.3 EXISTING UTILITIES

- A. Identify the location of existing utilities.
 - 1. Prior to trenching, the Contractor shall excavate at locations specifically indicated on the Plans, if any, and where new lines cross other utilities of uncertain depth and determine the elevation of the utility in question to ensure that the new line will clear the potential obstruction.
 - 2. The Contractor shall contact Underground Service Alert (USA) at 1-800-227-2600 for assistance in locating existing utilities.
 - 3. If, after the excavation, a crossing utility does present an obstruction, then the line and grade of the new line will be adjusted as directed by the Owner to clear the utility.
- B. Protect all existing utilities to remain in operation.
- C. Movement of construction machinery and equipment over existing pipes and utilities during construction shall be at Contractor's risk.
- D. Excavation made with power-driven equipment is not permitted within 2 feet of any known utility or subsurface structure.
 - 1. Use hand or light equipment for excavating immediately adjacent to known utilities or for excavations exposing a utility or buried structure.
 - 2. Start hand or light equipment excavation on each side of the indicated obstruction and continue until the obstruction is uncovered or until clearance for the new grade is assured.
 - 3. Support uncovered lines or other existing work affected by excavation until approval for backfill is obtained.
 - 4. Report damage of utility line or subsurface structures immediately to the Owner.
- E. Backfill trenches resulting from utility removal in lifts of 8 inches maximum.

3.4 TRENCH EXCAVATION

- A. General
 - 1. Excavation shall include removal of all water and materials that interfere with construction. The Contractor shall remove any water which may be encountered in the trench by pumping or other methods during the pipe laying, bedding and backfill operations. Material shall be sufficiently dry to permit approved jointing.
 - 2. Excavation shall include the construction and maintenance of bridges required for vehicular and pedestrian traffic, support for adjoining utilities.
 - 3. The Contractor shall be responsible to safely direct vehicular and pedestrian traffic through or around his/her work area at all times.

4. The Contractor shall relocate, reconstruct, replace or repair, at his/her own expense, all improvements which are in the line of construction or which may be damaged, removed, disrupted or otherwise disturbed by the Contractor.
- B. Existing Paving and Concrete:
1. Existing pavement over trench shall be sawcut, removed, and hauled away from the job. Existing pavement shall be neatly sawcut along the limits of excavations.
 2. Existing concrete over the trench shall be sawcut to a full depth in straight lines, at a minimum distance of 12 inches beyond the edge of the trench, either parallel to the curb or a right angles to the alignment of the sidewalk.
 3. Boards or other suitable material shall be placed under equipment outrigging to prevent damage to paved surfaces.
- C. Trench Width:
1. The maximum allowable trench widths at the top of the all pipe materials outside diameter of barrel pipe plus 18 inches. shall be as follows:
 - a. The maximum trench width shall be inclusive of all shoring.
 - b. If the maximum trench width is exceeded, the State's representative may direct the Contractor to encase or cradle the pipe in concrete at no additional charge.
 2. For pipes 3 inch diameter and larger, the free working space on each side of the pipe barrel shall not be less than 6 inches.
- D. Excavation Width at Springline of Pipe:
1. Up to a nominal pipe diameter of 24 inches: Minimum of twice the outside pipe diameter, or as otherwise allowed or required by the Geotechnical Engineer.
 2. Nominal pipe diameter of 30 inches through 36 inches: Minimum of the outside pipe diameter plus 2 feet, or as otherwise allowed or required by the Geotechnical Engineer.
 3. Nominal pipe diameter of 42 inches through 60 inches: Minimum of the outside pipe diameter plus 3 feet, or as otherwise allowed or required by the Geotechnical Engineer.
- E. Open Trench:
1. The maximum length of open trench shall be 300 feet or the distance necessary to accommodate the amount of pipe installed in a single day, whichever is greater. No trench shall be left open at the end of the day.
 2. Provisions for trench crossings and free access shall be made at all street crossings, driveways, water gate valves, and fire hydrants.
 3. Excavate by hand or machine. For gravity systems begin excavation at the outlet end and proceed upstream. Excavate sides of the trench parallel and equal distant from the centerline of the pipe. Hand trim excavation. Remove loose matter.

4. Excavation Depth for Bedding: Minimum of 6 inches below bottom of pipe or as otherwise allowed or required by the Geotechnical Engineer, except that bedding is not required for nominal pipe diameters of 2 inches or less.
5. Over-Excavations: Backfill trenches that have been excavated below bedding design subgrade, with approved bedding material.
6. Where forming is required, excavate only as much material as necessary to permit placing and removal of forms.
7. Grade bottom of trench to provide uniform thickness of bedding material and to provide uniform bearing and support for pipe along entire length. Remove stones to avoid point bearing.

F. Excavated Material:

1. All excavated material not required for backfill shall be immediately removed and properly disposed of in a legal manner by the Contractor.
2. Material excavated in streets and roadways shall be laid alongside the trench no closer than 2 feet from the trench edge and kept trimmed to minimize inconvenience to public traffic.
3. Provisions shall be made whereby all storm and wastewater can flow uninterrupted in gutters or drainage channels.

3.5 CONTROL OF WATER AND DEWATERING

- A. Contractor attention is directed to Section 31 23 19, Dewatering.
- B. Be solely responsible for dewatering trenches and excavations and subsequent control of ground and surface water. Provide and maintain such pumps or other equipment as may be necessary to control ground water and seepage to the satisfaction of the Geotechnical Engineer and the Owner until backfilling is completed.
- C. Dewater during backfilling operation so that groundwater is maintained a least one foot below level of compaction effort.
- D. Obtain the Geotechnical Engineer's approval for proposed control of water and dewatering methods.
- E. Reroute surface water runoff away from open trenches and excavations. Do not allow water to accumulate in trenches and excavations.
- F. Maintain dewatering system in place until dewatering is no longer required.

3.6 BRACING AND SHORING

- A. Conform to California OSHA requirements.
- B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the pipes and appurtenances being

constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.

- C. Be solely responsible for all bracing and shoring and, if requested by the Owner, submit details and calculations to the Owner. The Owner may forward the submittal to the Geotechnical Engineer, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations in trench section or around structures shall precede a response to the submittal by the Owner.
- D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the line, grade, or backfill compaction or operation of the utility being installed or adjacent utilities and facilities.

3.7 PIPE BEDDING

- A. Obtain approval of bedding material from the Geotechnical Engineer.
- B. Accurately shape bedding material to the line and grade called for on the Plans. Carefully place and compact bedding material to the elevation of the bottom of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of bedding material will not be permitted.
- C. Stabilization of Trench Bottom: When the trench bottom is unstable due to wet or spongy foundation, trench bottom shall be stabilized with gravel or crushed rock. The State's inspector will determine the suitability of the trench bottom and the amount of gravel or crushed rock needed to stabilize a soft foundation. Soft material shall be removed and replaced with gravel or crushed rock as necessary.
- D. Placement of Bedding Material: The trench bottom shall be cleaned to remove all loose native material prior to placing select backfill material. Sufficient select backfill material shall be placed in trench and tamped to bring trench bottom up to grade of the bottom of pipe. The relative compaction of tamped material shall be not less than 90 percent. It is the intention of these requirements to provide uniform bearing under the full length of pipe to a minimum width of 60 percent of the external diameter.

3.8 BACKFILLING

- A. Initial Backfill:
 - 1. Obtain approval of backfill material from Geotechnical Engineer.

2. Bring initial backfill up simultaneously on both sides of the pipe, so as to prevent any displacement of the pipe from its true alignment. Carefully place and compact initial backfill material to an elevation of 12 inches above the top of the pipe in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the Geotechnical Engineer. Jetting or ponding of initial backfill material will not be permitted.
- B. Pipe Detection: In trenches containing pressurized plastic pipes, tracer wire shall be placed directly above the pipe and shall be connected to all valves, existing exposed tracer wires, and other appurtenances as appropriate.
- C. Installation of Tracer Wire:
1. Install a continuous length of tracer wire for the full length of each run of nonmetallic pipe.
 2. Attach wire to top of pipe in such manner that it will not be displaced during construction operations.
 3. Form a mechanically and electrically continuous line throughout the pipeline, extending to the nearest valve or other pipeline appurtenance. Extend the wire up the outside of the valve box/riser and cut a hole that is 8 inches from the top, extend a 12 inch wire lead to the inside of the box. At other pipeline appurtenances, terminate the 12 inch wire lead inside the enclosure.
 4. Splice wire with a splicing device consisting of and electro-tin plated seamless copper sleeve conductor. Install as recommended by the manufacturer. Wrap splices and damaged insulation with electrician's tape.
- D. Installation of Warning Tape
1. Install tape approximately 1 foot above and along the centerline of the pipe.
 2. Where tape is not continuous lap tape ends a minimum of 2 feet.
- E. Subsequent Backfill:
1. Above the level of initial backfill, the trench shall be backfilled with non-expansive native material from trench excavation or with imported select backfill material (Contractor's option). Subsequent backfill shall be free of vegetable matter, stones or lumps exceeding 3 inches in greatest dimension, and other unsatisfactory material.
 2. Bring subsequent backfill to subgrade or finish grade as indicated. Carefully place and compact subsequent backfill material to the proper elevation in layers not exceeding 8 inches in loose thickness. Compact bedding material at optimum water content to 90% relative compaction, except that the upper 36 inches in areas subject to vehicular traffic shall be compacted to at least 95% relative compaction, unless specified otherwise on the Plans or by the Geotechnical Engineer. Compact by pneumatic tampers or other mechanical means approved by the

Geotechnical Engineer. Jetting or ponding of subsequent backfill material will not be permitted.

- F. Do not use compaction equipment or methods that produce horizontal or vertical earth pressures that may cause excessive pipe displacement or damage the pipe. Jetting of trench backfill is not permitted.
- G. Utility backfill shall be inspected and tested by the Geotechnical Engineer during placement. Cooperate with the Geotechnical Engineer and provide working space for such tests in operations. Backfill not compacted in accordance with these specifications shall be re-compacted or removed as necessary and replaced to meet the specified requirements, to the satisfaction of the Geotechnical Engineer and the Owner prior to proceeding with the Project.
- H. Compaction testing shall be in accordance with California Test Method ASTM D1556 or D1557.

3.9 CLEANUP

- A. Upon completion of utility earthwork all lines, manholes catch basins, inlets, water meter boxes and other structures shall be thoroughly cleaned of dirt, rubbish, debris and obstructions of any kind to the satisfaction of the Owner.

END OF SECTION

SECTION 32 11 00

PAVEMENT BASE COURSE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Aggregate subbase
- B. Aggregate base
- C. Cement treated base
- D. Lime stabilization

1.2 RELATED SECTIONS

- A. Section 31 20 00, Earth Moving

1.3 RELATED DOCUMENTS

- A. ASTM:
 - 1. D1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort
 - 2. D3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction
 - 3. E329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction
 - 4. E548, Guide for General Criteria Used for Evaluating Laboratory Competence
- B. Caltrans Standard Specifications, 2015
 - 1. Section 24, Stabilized Soils
 - 2. Section 25, Aggregate Subbases
 - 3. Section 26, Aggregate Bases
 - 4. Section 27, Cement Treated Bases

1.4 DEFINITIONS

- A. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E329 to conduct soil materials and rock definition testing, as documented according to ASTM D3740 and ASTM E548.
- B. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material $\frac{3}{4}$ cubic yards or more in volume that when tested by an independent geotechnical testing agency, according to

ASTM D1586, exceeds a standard penetration resistance of 100 blows/2 inches.

- C. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below grade.
- D. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials. Perform work in accordance with Section 31 20 00, Earth Moving.

1.5 SUBMITTALS

- A. Submit material certificates signed by the material producer and the Contractor, certifying that that each material item complies with, or exceeds the specified requirements.

1.6 QUALITY ASSURANCE

- A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Engineer.
- B. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D1557.
- C. Perform installation of base materials under the observation of the Geotechnical Engineer. Materials placed without approval of the Geotechnical Engineer will be presumed to be defective and, at the discretion of the Geotechnical Engineer, shall be removed and replaced at no cost to the Owner. Notify the Geotechnical Engineer at least 24 hours prior to commencement of base material installation and at least 48 hours prior to testing.
- D. Do not mix or place cement treated base when the temperature is below is below 36 degrees F or when the ground is frozen.
- E. Finish surface of material to be stabilized prior to lime treatment shall be in accordance with Caltrans Standard Specification Section 24, Stabilized Soils.
- F. Finish surface of the stabilized material after lime treatment shall be in accordance with Caltrans Standard Specifications Section 24, Stabilized Soils.
- G. Finish surface of cement treated base shall be in accordance with Caltrans Standard Specification Section 27, Cement Treated Bases.
- H. Do not project the finish surface of aggregate subbase above the design subgrade.

- I. Finish grade tolerance at completion of base installation: +0.05 feet

1.7 PROJECT CONDITIONS

- A. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.
- B. Temporarily stockpile material in an orderly and safe manner and in a location approved by the Owner.
- C. Provide dust and noise control in accordance with Section 01 10 00, Supplemental General Requirements.

PART 2 - PRODUCTS

2.1 AGGREGATE SUBBASE

- A. Material: Class 2 in accordance with Caltrans Standard Specification Section 25, Aggregate Subbases.

2.2 AGGREGATE BASE

- A. Material: Class 2 or 3, 1 ½ inch maximum or ¾ inch maximum in accordance with Caltrans Standard Specification Section 26, Aggregate Bases.

2.3 CEMENT TREATED BASE

- A. Material: Class A or B maximum in accordance with Caltrans Standard Specification Section 27, Cement Treated Bases.

2.4 LIME STABILIZED SOILS

- A. Material: In accordance with Caltrans Standard Specification Section 24-2, Lime Stabilized Soil.

PART 3 - EXECUTION

3.1 GENERAL

- A. Placement and compaction of material by flooding, ponding, or jetting will not be permitted.

3.2 WET WEATHER CONDITIONS

- A. Do not place or compact subgrade if above optimum moisture content.
- B. If the Geotechnical Engineer allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Engineer.

3.3 AGGREGATE SUBBASE

- A. Spreading and Compacting: In accordance with Caltrans Standard Specification Section 25-1.03D, Spreading and 25-1.03E, Compacting.

3.4 AGGREGATE BASE

- A. Watering, Spreading and Compacting: In accordance with Caltrans Standard Specification Section 26-1.03D, Spreading and 26-1.03E, Compacting.

3.5 CEMENT TREATED BASE

- A. Proportioning and Mixing Plant-Mixed: In accordance with Caltrans Standard Specification Section 27-1.03D.

3.6 LIME STABILIZATION

- A. Lime stabilization shall conform to Caltrans Standard Specification Section 24, Stabilized Soils, and the following:
 1. Add lime in the amount specified by the Geotechnical Engineer.
 2. Lime treat subgrade soils from back of curb to back of curb to a depth specified by the Geotechnical Engineer.
 3. Mix in two mixing periods, both with the tines lowered to the same depth. Both mixing periods shall be monitored and verified by the Geotechnical Engineer. The second mixing shall occur at about 24 hours after the initial mixing.
 4. Compact and grade the lime mixed subgrade immediately after the second mixing.
 5. Compact the lime treated subgrade to 93 percent as determined by ASTM D1557.
 6. After application of the curing seal, do not allow traffic on the lime treated material for a period of 7 days in lieu of the 3 days specified in Caltrans Standard Specifications, Section 24.
 7. Proof-roll the stabilized subgrade after compacting to confirm that a non-yielding surface has been achieved. Yielding areas, if any, shall be mitigated. Mitigation could consist of over-excavation, utilization of stabilization fabric, or chemical treatment. Each case shall be addressed individually in the field by the Geotechnical Engineer.

3.7 DISPOSAL

- A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

END OF SECTION

SECTION 32 12 16

ASPHALT PAVING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Hot Mix Asphalt
- B. Tack coat
- C. Hot Mix Asphalt paving
- D. Hot Mix Asphalt overlay
- E. Speed bumps
- F. Asphalt curbs
- G. Pavement grinding
- H. Adjusting manholes, valves, monument covers and other structures to grade

1.2 RELATED SECTIONS

- A. Section 31 20 00, Earth Moving
- B. Section 32 11 00, Pavement Base Course

1.3 RELATED DOCUMENTS

- A. ASTM
 - 1. D979: Standard Practice for Sampling Bituminous Paving Mixtures
 - 2. D1188: Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Coated Samples
 - 3. D2041: Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
 - 4. D2726: Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
 - 5. D2950: Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods
 - 6. D3549: Standard Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
- B. Caltrans Standard Specifications, 2015
 - 1. Section 20: Landscape
 - 2. Section 39: Asphalt Concrete
 - 3. Section 88: Engineering Fabrics

4. Section 92: Asphalt Binder
5. Section 94: Asphaltic Emulsions
6. Section 96: Geosynthetics

1.4 DEFINITIONS

- A. ASTM: American Society for Testing Materials.
- B. Caltrans: State of California, Department of Transportation

1.5 QUALITY ASSURANCE

- A. Testing Agency: Owner's Representative will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.
 1. Testing agency will conduct and interpret tests and state in each report whether tested work complies with or deviates from specified requirements.
- B. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.
- C. Thickness of hot mix asphalt: In-place compacted thickness of asphalt courses will be determined according to ASTM D3549.
- D. Surface Smoothness: Finished surface of each asphalt course will be tested for compliance with smoothness tolerances.
- E. In-Place Density: Samples of uncompacted paving mixtures and compacted pavement will be secured by testing agency according to ASTM D979.
 1. Reference maximum theoretical density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D2041, and compacted according to job-mix specifications.
 2. In-place density of compacted pavement may be determined by testing core samples according to ASTM D1188 or ASTM D2726.
 - a. One core sample may be taken for every 1000 square yard or less of installed pavement, but in no case will fewer than 3 cores be taken.
 - b. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D2950 and correlated with ASTM D1188 or ASTM D2726.

1.6 SUBMITTALS

- A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.

- B. Job-Mix Designs: Certificates signed by manufacturers certifying that each hot mix asphalt mix complies with requirements.
- C. Material Certificates: Certificates signed by manufacturers certifying that each material complies with requirements.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations:
 - 1. Tack Coat: Minimum surface temperature of 60 F at application.
 - 2. Asphalt Base Course: Minimum surface temperature of 40 F and rising at application.
 - 3. Asphalt Surface Course: Minimum surface temperature of 60 F at application.
 - 4. Reinforcing Fabric: Air temperature is 50 F and rising and pavement temperature is 40 F and rising.

PART 2 - PRODUCTS

2.1 HOT MIX ASPHALT

- A. Type A In accordance with Caltrans Standard Specifications Section 39-2, Hot Mix Asphalt.
- B. Hot Mix Asphalt Materials:
 - 1. Asphalt Binder: Grade PG 64-10 in accordance with Caltrans Standard Specification Section 92, Asphalt Binders.
 - 2. Tack Coat: Grade SS1 in accordance with Caltrans Standard Specification Section 94, Asphaltic Emulsions.
- C. Aggregates: 1 inch max gradation for virgin aggregate and recycled asphalt pavement (RAP) in accordance with to Caltrans Standard Specification Section 39-2.02, Type A Hot Mix Asphalt.
- D. Geosynthetic Pavement Interlayer: Paving Fabric in accordance with Caltrans Standard Specification Section 96, Geosynthetics.
- E. Soil Sterilant: In accordance with Caltrans Standard Specifications Section 20-5.03, Inert Ground Covers and Mulches.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.
- B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.

- C. If necessary, perform subgrade preparation or remediation in accordance with Section 31 20 00, Earth Moving.
- D. Notify Owner in writing of any unsatisfactory conditions. Do not begin paving until these conditions have been satisfactorily corrected.

3.2 PAVEMENT GRINDING

- A. Clean existing paving surface of loose or deleterious material immediately before pavement grinding.
- B. Grind conforms as indicated.

3.3 SOIL STERILANT

- A. Furnish and apply to areas per manufacturer's specifications.

3.4 SURFACE PREPARATION FOR AGGREGATE BASE MATERIALS

- A. General: Immediately before placing asphalt materials remove loose and deleterious material from substrate surfaces and ensure that prepared subgrade is ready to receive paving in accordance with Caltrans Standard Specification Section 39-2.01C(3)(b) and in accordance with Section 32 11 00, Pavement Base Course.
- B. Tack Coat: Apply uniformly and at specified rates between HMA layers, to vertical surfaces of curbs, gutters and construction joints, and to existing pavement, including planed surfaces, in accordance with Caltrans Standard Specification Section 39-2.01C(3)(f).
 - 1. Allow tack coat to cure undisturbed before paving.
 - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

3.5 SURFACE PREPARATION FOR PAVEMENT AT HOT MIX ASPHALT OVERLAYS

- A. Pavement Irregularities: Level with hot mix asphalt, Type A, ½ inch max aggregate.
- B. Pavement Cracks:
 - 1. Less than ¼ inch wide: Clean of all dirt by compressed air jet, spray and seal with RS-1 asphaltic emulsion.
 - 2. Wider than ¼ inch: Clean of all dirt by compressed air jet, spray and seal with RS-1 asphaltic emulsion and skin patch.
- C. Clean surface of all material, such as leaves, dirt, sand, gravel, water and vegetation prior to applying binder of paving asphalt to existing surface.

3.6 GEOSYNTHETIC PAVEMENT INTERLAYER

- A. Place geosynthetic pavement interlayer in accordance with Caltrans Standard Specification Section 39-2.01C(3)g.

3.7 HOT MIX ASPHALT SPREADING AND COMPACTING EQUIPMENT

- A. Provide spreading and compacting equipment in accordance with Caltrans Standard Specification Section 39-2.01C(2).

3.8 HOT MIX ASPHALT PLACEMENT

- A. Place, spread and compact hot mix asphalt to required grade, cross section, and thickness in accordance with Caltrans Standard Specification Sections 39-2.01C(2), 39-2.01C(3), and 39-2.01C(8).
- B. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

3.9 JOINTS

- A. Construct joints to ensure continuous bond between adjoining paving sections in accordance with Caltrans Standard Specification Sections 39-2.01C(4)
 - 1. Construct joints free of depressions with same texture and smoothness as other sections of asphalt course.
 - 2. Clean contact surfaces and apply tack coat.
 - 3. Offset longitudinal joints in successive courses a minimum of 6 inches.
 - 4. Offset transverse joints in successive courses a minimum of 24 inches.
 - 5. Compact joints as soon as hot mix asphalt will bear roller weight without excessive displacement.

3.10 COMPACTION

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact in accordance with Caltrans Standard Specification Sections 39-2.01C(2).
- B. Compaction Requirements: Average Density to be 92 percent of reference maximum theoretical density according to ASTM D2041, but not less than 90 percent nor greater than 96 percent.
- C. Finish Rolling: Finish roll paved surfaces to remove roller marks while asphalt is still warm.
- D. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while still hot, with back of rake

or smooth iron. Compact thoroughly using tamper or other satisfactory method.

- E. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh asphalt. Compact by rolling to specified density and surface smoothness.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

3.11 HOT MIX ASPHALT CURBS AND DIKES

- A. Construction: Place over compacted surfaces in accordance with Caltrans Standard Specification Section 39-2.01C(9). Apply a light tack coat prior to construction, unless pavement surface is still tacky and free of dust.
- B. Shape: Place hot mix asphalt to curb cross section indicated.

3.12 SPEED BUMPS

- A. Construct speed bumps over compacted pavement surfaces in accordance with Caltrans Standard Specification Section 39-2. Apply a light tack coat prior to construction, unless pavement surface is still tacky and free of dust.
- B. Place asphalt concrete by hand using a template/screed designed to result in speed bump cross-section indicated after compaction.
- C. Compact speed bumps with 8 ton static roller.

3.13 ADJUSTING MANHOLES, VALVES, MONUMENT COVERS AND OTHER STRUCTURES TO GRADE

- A. Remove pavement, using vertical cuts, as needed to remove frame and provide for concrete collar. Do not damage adjacent pavement.
 - 1. Circular Covers: Cut circle with radius 6 inches larger than cover and concentric with cover.
 - 2. Rectangular Covers: Cut rectangle 6 inches larger than cover on all sides.
- B. Install grade rings or blocking as needed to raise cover to finish grade.
- C. Pour concrete collar:
 - 1. Bottom of Collar: Top of existing collar or 6 inches below top of proposed collar, whichever is at a higher elevation.
 - 2. Top of Collar: Bottom of existing asphalt pavement.
 - 3. Apply tack coat to all exposed surfaces.
 - 4. Fill excavation with hot mix asphalt and, while still hot, compact flush with adjacent surface.

3.14 INSTALLATION TOLERANCES

- A. Hot Mix Asphalt Pavement:
 - 1. Course thickness and surface smoothness shall be in accordance with Caltrans Standard Specification Section 39-2.01A(4)(i)(iii)
 - 2. Total Thickness: Not less than indicated.

- B. Trench Patch:
 - 1. Compacted surface: Within 0.01 foot of adjacent pavement.
 - 2. Do not create ponding.

- C. Adjust Covers:
 - 1. Compacted surface: Up to 0.01 foot higher, and no lower, than adjacent pavement.
 - 2. Do not create ponding.

END OF SECTION

SECTION 32 13 13
CONCRETE PAVEMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Furnishing, placing, spreading, compacting and shaping portland cement concrete pavement with undoweled transverse weakened plane joints, for vehicular traffic.
- B. Form construction and use in placing portland cement concrete pavement.
- C. Joints for portland cement concrete pavement.
- D. Finishing portland cement concrete pavement.
- E. Curing and protecting portland cement concrete pavement.

1.2 RELATED SECTIONS

- A. 31 20 00, Earth Moving
- B. 32 11 00, Pavement Base Course
- C. 32 13 18, Cement and Concrete for Exterior Improvements

1.3 RELATED DOCUMENTS

- A. AASHTO Standard Specifications
 - 1. T132: Standard Method of Test for Tensile Strength of Hydraulic Cement Mortars
- B. ASTM Standards
 - 1. D36: Standard Test Method for Softening Point of Bitumen (Ring-and-Ball Apparatus)
 - 2. A615: Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
 - 3. A706: Standard Specification for Deformed and Plain Low-Alloy Steel Bars for Concrete Reinforcement.
 - 4. A775: Standard Specification for Epoxy Coated Steel Reinforcing Bars.
 - 5. A934: Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars.
 - 6. A996: Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
 - 7. C94: Standard Specification for Ready-Mixed Concrete

8. C603: Standard Test Method for Extrusion Rate and Application Life of Elastomeric Sealants
 9. C639: Standard Test Method for Rheological (Flow) Properties of Elastomeric Sealants
 10. C661: Standard Test Method for Indentation Hardness of Elastomeric-Type Sealants by Means of a Durometer
 11. C679: ASTM C679-15 Standard Test Method for Tack-Free Time of Elastomeric Sealants
 12. C719: Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle)
 13. C793: Standard Test Method for Effects of Laboratory Accelerated Weathering on Elastomeric Joint Sealants
 14. C881: Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete.
 15. D412: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension
 16. D1640: Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings
 17. D2628: Standard Specification for Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements.
 18. D2835: Standard Specification for Lubricant for Installation of Preformed Compression Seals in Concrete Pavements.
 19. D3963: Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Steel Reinforcing Bars.
 20. D6690: Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.
- C. Caltrans Standard Specifications, 2015
1. Section 10, General
 2. Section 40, Concrete Pavement
 3. Section 52, Reinforcement
 4. Section 95, Epoxy
- D. Caltrans Standard Plans:
1. Plan P1: Jointed Plan Concrete Pavement – New Construction
 2. Plan P10: Concrete Pavement Dowel Bar Details

1.4 DEFINITIONS

- A. AASHTO: American Association of State Highway and Transportation Officials
- B. ASTM: American Society for Testing and Materials
- C. Caltrans: State of California, Department of Transportation

1.5 QUALITY ASSURANCE

- A. Testing Agency: Owner's Representative will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.
 - 1. Testing agency will conduct and interpret tests and state in each report whether tested work complies with or deviates from specified requirements.
- B. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.
- C. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C94 requirements for production facilities and equipment.
- D. Installer Qualification: An experienced installer who has completed pavement work similar in material, design and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- E. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant and each aggregate from one source.

1.6 SUBMITTALS

- A. Follow submittal procedure outlined in Section 01 10 00, Supplemental General Requirements.
- B. Design Mixes: For each concrete pavement mix. Include alternate mix designs when characteristics of materials, project conditions, weather, test results or other circumstances warrant adjustments.
- C. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements.
 - 1. Cementitious materials and aggregates
 - 2. Steel reinforcement and reinforcement accessories
 - 3. Admixtures
 - 4. Curing compound
 - 5. Applied finish material
 - 6. Bonding agent of adhesive
 - 7. Joint filler
 - 8. Joint Sealant
 - 9. Tie Bars
 - 10. Epoxy
 - 11. Backer Rods

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT CONCRETE

- A. In accordance with Section 32 13 18, Cement and Concrete for Exterior Improvements.

2.2 BASE MATERIAL

- A. In accordance with Section 32 11 00, Pavement Base Course.

2.3 TIE BARS

- A. Deformed reinforcing steel bars conforming to the requirements of ASTM Designation A615, Grade 40 or 60
- B. Epoxy-coat in accordance with Caltrans Standard Specification Section 52-2.02, Epoxy-Coated Reinforcement, except bars must comply with ASTM A706; ASTM A996; or ASTM A615, Grade 40 or 60.
- C. Do not bend tie bars.

2.4 EPOXY

- A. Bond tie bars to existing concrete with epoxy resin in accordance with Caltrans Standard Specification Section 95-1.02D, Epoxy Adhesive for Bonding Freshly Mixed Concrete to Hardened Concrete.

2.5 SILICONE JOINT SEALANT

- A. Furnish low modulus silicone joint sealant in a one-part silicone formulation. Do not use acid cure sealants. Compound to be compatible with the surface to which it is applied and conform to the following requirements:

Specification	Test Method	Requirement
Tensile stress, 150% elongation, 7-day cure at 77° ± 1°F and 45% to 55% Relative Humidity	ASTM D412 (Die C)	45 psi max.
Flow at 77° ± 1°F	ASTM C639 ^a	Shall not flow from channel
Extrusion Rate at 77° ± 1°F	ASTM C603 ^b	75-250 g per min.
Specific Gravity	ASTM D792 Method A	1.01 to 1.51
Durometer Hardness, at 0°F, Shore A, cured 7 days at 77° ± 1°F	ASTM C661	10 to 25
Ozone and Ultraviolet Resistance, after 5000 hours	ASTM C793	No chalking, cracking or bond loss
Tack free at 77° ± 1°F and 45% to 55% Relative Humidity	ASTM C679	Less than 75 minutes
Elongation, 7 day cure at 77° ± 1°F and 45% to 55% Relative Humidity	ASTM D412 (Die C)	500 percent min.
Set to Touch, at 77° ± 1°F and 45% to 55% Relative Humidity	ASTM D1640	Less than 75 minutes
Shelf Life, from date of shipment	—	6 months min.
Bond, to concrete mortar-concrete briquets, air cured 7 days at 77° ± 1°F	AASHTO T132 ^c	50 psi min.
Movement Capability and Adhesion, 100% extension at 0°F after air cured 7 days at 77° ± 1°F, and followed by 7 days in water at 77° ± 1°F	ASTM C719 ^d	No adhesive or cohesive failure after 5 cycles

Notes:

- a. ASTM Designation: C639 Modified (15 percent slope channel A).
 - b. ASTM Designation: C603, through 1/8 inches opening at 50 psi.
 - c. Mold briquets in conformance with the requirements in AASHTO Designation: T132, sawed in half and bonded with a 1/16 inches maximum thickness of sealant and tested in conformance with the requirements in AASHTO Designation: T132. Briquets shall be dried to constant mass at 212 ± 10°F.
 - d. Movement Capability and Adhesion: Prepare 12 inch x 1 inch x 3 inch concrete blocks in conformance with the requirements in ASTM Designation: C719. A sawed face shall be used for bond surface. Seal 2 inch of block leaving 1/2 inches on each end of specimen unsealed. The depth of sealant shall be 3/8 inches and the width 1/2 inches.
- B. Formulate the silicon joint sealant to cure rapidly enough to prevent flow after application on grades of up to 15 percent.
- C. Furnish to the Owner's Representative a Certificate of Compliance. Accompany certificate with a certified test report of the results of the required tests performed on the sealant material within the previous 12 months prior to proposed use. Provide the certificate and accompanying test report for each lot of silicone joint sealant prior to use on the project.

2.6 ASPHALT RUBBER JOINT SEALANT

- A. Conform to the requirements of ASTM Designation: D6690 as modified herein or to the following:
 - 1. Provide a mixture of paving asphalt and ground rubber. Ground rubber to be vulcanized or a combination of vulcanized and de-vulcanized materials ground so that 100 percent will pass a No. 08 sieve and contain not less than 22 percent ground rubber, by mass. Modifiers may be used to facilitate blending.
 - 2. The Ring and Ball softening point shall be 135°F minimum, when tested in conformance with the requirements in ASTM D36.
 - 3. Provide asphalt rubber sealant material capable of being melted and applied to cracks and joints at temperatures below 400°F.
- B. The penetration requirements of Section 4.2 of ASTM Designation: D6690 do not apply. The required penetration at 77°F, 5 oz, 5s, shall not exceed 120.
- C. The resilience requirements of Section 4.5 of ASTM Designation: D6690 do not apply. The required resilience, when tested at 77°F, shall have a minimum of 50 percent recovery.
- D. Accompany each lot of asphalt rubber joint sealant shipped to the job site, whether as specified herein or conforming to the requirements of ASTM Designation D6690, as modified herein, by a Certificate of Compliance, storage and heating instructions and precautionary instructions for use.
- E. Heat and place in conformance with the manufacturer's written instructions and the details shown on the Plans. Provide manufacturer's instructions to the Owner's Representative. Do not place when the pavement surface temperature is below 50 °F.

2.7 PREFORMED COMPRESSION JOINT SEALANT

- A. Material: ASTM Designation: D2628.
 - 1. Number of cells: 5 or 6.
 - 2. Lubricant Adhesive: ASTM Designation D2835.
 - 3. Install compression seals along with lubricant adhesive according to the manufacturer's recommendations. Submit manufacturer's recommendations to the Owner's Representative`.
- B. Accompany each lot of compression seal and lubricant adhesive by a Certificate of Compliance, storage instructions and precautionary instructions for use. Also submit the manufacturer's data sheet with installation instructions and recommended model or type of preformed compression seal for the joint size and depth as shown on the Plans. Show evidence that the selected seal is being compressed at level between 20 and 50 percent at all times for the joint width and depth shown on the Plans.

2.8 BACKER RODS

- A. Provide backer rods that have a diameter prior to placement at least 25 percent greater than the width of the saw cut after sawing and are expanded, crosslinked, closed-cell polyethylene foam that is compatible with the joint sealant so that no bond, adverse reaction occurs between the rod and sealant. In no case use a hot pour sealant that will melt the backer rod. Submit a manufacturer's data sheet verifying that the backer rod is compatible with the sealant to be used.

2.9 SLIP RESISTIVE AGGREGATE FINISH

- A. Factory-graded, packaged, rustproof, nonglazing, abrasive aggregate of fused aluminum-oxide granules or crushed emery aggregate containing not less than 50 percent aluminum oxide and not less than 20 percent ferric oxide; unaffected by freezing, moisture, and cleaning materials.

PART 3 - EXECUTION

3.1 WATER SUPPLY

- A. Provide water supply in accordance with Caltrans Standard Specification Section 10-6, Watering.

3.2 SUBGRADE

- A. Prepare subgrade in accordance with Caltrans Standard Specification Section 40-1.03F, Placing Concrete.

3.3 SOIL STERILANT

- A. Furnish and apply to areas indicated in accordance with Section 31 20 00, Earth Moving.

3.4 PLACING

- A. Prepare concrete in accordance with Caltrans Standard Specification Section 40-1.03F, Placing Concrete.

3.5 SPREADING COMPACTING AND SHAPING

- A. Conform to the following:
 - 1. Stationary Side Form Construction: In accordance with Caltrans Standard Specification Section 40-1.03F(4), Stationary Side-Form Construction.
 - 2. Slip Form Construction: In accordance with Caltrans Standard Specification Section 40-1.03F(4), Slip Form Construction.

3.6 INSTALLING TIE BARS

- A. Install at longitudinal contact joints, longitudinal weakened plane joints, and transverse contact joints as shown on the Plans. In no case, shall any consecutive width of new portland cement concrete pavement tied together with tie bars exceed 50 feet. In no case shall tie bars be used at a joint where portland cement concrete and asphalt concrete pavements abut.
- B. Tie bars shall be installed at longitudinal joints by one of the 3 following methods:
 - 1. Drilling and bonding in conformance with the details shown on the Plans. Provide a two-component, epoxy-resin, conforming to the requirements of ASTM Designation: C881, Type V. Grade 3 (Non-Sagging), Class shall be as follows:

<u>Temperature of Concrete Resin</u>	<u>Required Class of Epoxy</u>
Lower than 40° F	A
40° F through 60° F	B
Above 60° F	C

- 2. Provide, at least 7 days prior to start of work, a Certificate of compliance and a copy of the manufacturer's recommended installation procedure. The drilled holes shall be cleaned in accordance with the epoxy manufacturer's instructions and shall be dry at the time of placing the epoxy and tie bars. Immediately after inserting the tie bars into the epoxy, the tie bars shall be supported as necessary to prevent movement during the curing and shall remain undisturbed until the epoxy has cured a minimum time as specified by the manufacturer. Tie bars that are improperly bonded, as determined by the Owner's Representative, will be rejected. If rejected, adjacent new holes shall be drilled, as directed by the Owner's Representative, and new tie bars shall be placed and securely bonded to the concrete. All work necessary to correct improperly bonded tie bars shall be performed at the Contractor's expense.
- 3. Insert the tie bars into the plastic slip-formed concrete before finishing the concrete. Inserted tie bars shall have full contact between the bar and the concrete. When tie bars are inserted through the pavement surface, the concrete over the tie bars shall be reworked and refinished to such an extent that there is no evidence on the surface of the completed pavement that there has been any insertion performed. Any loose tie bars shall be replaced by drilling and grouting into place with epoxy as described in method 1 above at the Contractor's expense.
- 4. By using threaded dowel splice couplers fabricated from deformed bar reinforcement material, free of external welding or machining. Threaded dowel splice couplers shall be accompanied by a Certificate of Compliance and installation instructions. Installation of threaded dowel splice couplers shall conform to the requirements of the manufacturer's recommendations.

3.7 JOINTS

- A. Construct joints in accordance with Caltrans Standard Specification Section 40-1.03B, Joints, except that tie bars shall be as specified under Part 1, Materials.
 - 1. Construction Joints: In accordance with Caltrans Standard Specification Section 40-1.03B(2), Construction Joints.
 - a. Construct a construction joint at the end of each day's work, or where concrete placement is interrupted for more than 30 minutes, to coincide with the next weakened plane joint location.
 - b. If sufficient concrete has not been mixed to form a slab to match the next contraction joint, when an interruption occurs, the excess concrete shall be removed and disposed of back to the last preceding joint. The cost of removing and disposing of any excess concrete shall be at the Contractor's expense. Any excess material shall be become the property of the Contractor and shall be properly disposed of.
 - c. A metal or wooden bulkhead (header) shall be used to form the joint. The bulkhead shall be designed to accommodate the installation of tie bars.
 - 2. Contraction Joints: In accordance with Caltrans Standard Specification Section 40-1.03B (3), Contraction Joints, except that the insert method of forming joints in pavement shall not be used.

3.8 FINISHING

- A. Finish concrete in accordance with Caltrans Standard Specification Section 40-1.03H, Finishing.
- B. Slip-Resistive Aggregate Finish: Before final floating, spread slip-resistive aggregate finish on paving surface according to manufacturer's written instructions and as follows:
 - 1. Uniformly spread dampened, slip-resistive aggregate over paving surface in two applications. Tamp aggregate flush with surface using a steel trowel, but do not force below surface.
 - 2. Uniformly distribute approximately two-thirds of slip-resistive aggregate over paving surface with mechanical spreader, allow to absorb moisture, and embed by power floating. Follow power floating with a second slip-resistive aggregate application, uniformly distributing remainder of material at right angles to first application to ensure uniform coverage, and embed by power floating.

3.9 CURING

- A. Cure concrete in accordance with Caltrans Standard Specification Section 40-1.03I, Curing.

3.10 SEALING JOINTS

- A. Liquid Joint Sealant Installation.
1. The joint sealant detail for transverse and longitudinal joints, as shown on the Plans, shall apply only to weakened plane joints. Construct weakened plane joints by the sawing method. Should grinding or grooving be required over or adjacent to any joint after sealant has been placed, completely remove the joint material and disposed of, and replace at the Contractor's expense. Recess sealant below the final finished surface as shown on the Plans.
 2. At the Contractor's option, transverse weakened plane joints shall be either Type DSC or Type SSC as shown on the Plans. Longitudinal weakened plane joints shall be Type SSC only as shown on the Plans.
 3. Seven days after the concrete pavement placement and not more than 4 hours before placing backer rods and joint sealant materials, clean the joint walls by the dry sand blast method and other means as necessary to completely remove from the joint all objectionable material such as soil, asphalt, curing compound, paint and rust. After cleaning the joint, remove all traces of sand, dust and loose material from and near the joint for a distance along the pavement surfaces of at least 2 inch on each side of the joint by the use of a vacuum device. Remove surface moisture at the joints by means of compressed air or moderate hot compressed air or other means approved means. Do not use drying procedures that leave a residue or film on the joint wall. Sandblasting equipment shall have a maximum nozzle diameter size of $1/4 \pm 1/32$ inches and a minimum pressure of 90-psi.
 4. Install backer rod as shown on the Plans. Provide an expanded, closed-cell polyethylene foam backer rod that is compatible with the joint sealant so that no bond or adverse reaction occurs between the rod and sealant. Install backer rod when the temperature of the portland cement concrete pavement is above the dew point of the air and when the air temperature is 40°F or above. Install backer rod when the joints to be sealed have been properly patched, cleaned and dried. Do not use a method of placing backer rod that leave a residue or film on the joint walls.
 5. Immediately after placement of the backer rod, place the joint sealant in the clean, dry, prepared joints as shown on the Plans. Apply the joint sealant by a mechanical device with a nozzle shaped to fit inside the joint to introduce the sealant from inside the joint. Apply adequate pressure to the sealant to ensure that the sealant material is extruded evenly and that full continuous contact is made with the joint walls. After application of the sealant recess the surface of the sealant as shown on the Plans.
 6. Any failure of the joint material in either adhesion or cohesion of the material will be cause for rejection of the joint. Conform the finished surface of joint sealant to the dimensions and allowable tolerances shown on the Plans. Rejected joint materials or joint material whose finished surface does not conform to the dimensions shown on the

Plans shall be repaired or replaced, at the Contractor's expense, with joint material that conforms to the requirements.

7. After each joint is sealed, remove all surplus joint sealer on the pavement surface. Traffic shall not be permitted over the sealed joints until the sealant is tack free and set sufficiently to prevent embedment of roadway debris into the sealant.
- B. Preformed Compression Joint Seal Installation
1. The compression seal alternative joint detail for transverse and longitudinal joints, as shown on the Plans, shall apply only to weakened plane joints. Construct weakened plane joints by the sawing method. Should grinding or grooving be required over or adjacent to any joint after the compression seal has been placed, completely remove the joint materials and disposed of, and replace at the Contractor's expense. Compression seal shall be recessed below the final finished surface as shown on the Plans.
 2. At the Contractor's option, transverse weakened plane joints shall be either Type DSC or Type SSC as shown on the Plans. Longitudinal weakened plane joints shall be Type SSC only as shown on the Plans.
 3. Seven days after the concrete pavement placement and not more than 4 hours before placing preformed compression joint seals, clean the joint walls by the dry sand blast method and other means as necessary to completely remove from the joint all objectionable material such as soil, asphalt, curing compound, paint and rust. After cleaning the joint, remove all traces of sand, dust and loose material from and near the joint for a distance along the pavement surfaces of at least 50 mm on each side of the joint by the use of a vacuum device. Remove surface moisture at the joints by means of compressed air or moderate hot compressed air or other means. Do not use drying procedures that leave a residue or film on the joint wall. Sandblasting equipment shall have a maximum nozzle diameter size of $1/4 \pm 1/32$ inches and a minimum pressure of 90 psi.

3.11 PROTECTING CONCRETE PAVEMENT

- A. Protect pavement in accordance with Caltrans Standard Specification Section 40-1.03J Protecting Concrete Pavement.

END OF SECTION

SECTION 32 13 18

CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Materials for portland cement concrete
- B. Aggregate and aggregate grading for portland cement concrete
- C. Water for portland cement concrete
- D. Admixtures for portland cement concrete
- E. Proportioning for portland cement concrete
- F. Mixing and transporting portland cement concrete
- G. Formwork for cast in place portland cement concrete
- H. Embedded materials for portland cement concrete
- I. Steel reinforcement for portland cement concrete
- J. Placing and finishing portland cement concrete
- K. Curing portland cement concrete
- L. Protecting portland cement concrete

1.2 RELATED SECTIONS

- A. Section 32 12 16, Asphalt Paving
- B. Section 32 13 13, Concrete Pavement

1.3 RELATED DOCUMENTS

- A. ASTM Standards
 - 1. A615, Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
 - 2. A1064, Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
 - 3. C94, Standard Specification for Ready-mixed Concrete
 - 4. C150, Standard Specification for Portland Cement

5. C260, Standard Specification for Air-Entraining Admixtures for Concrete
 6. C309, Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
 7. C494, Standard Specification for Chemical Admixtures for Concrete.
 8. C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for use in Portland Cement
 9. C1017, Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
 10. D1557, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort
 11. D1751, Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
- B. Caltrans Standard Specifications, 2018
1. Section 51: Concrete Structures
 2. Section 73: Concrete Curbs and Sidewalks
 3. Section 90: Concrete

1.4 DEFINITIONS

- A. ASTM: American Society for Testing and Materials

1.5 SUBMITTALS

- A. Concrete Mix Design: Have all concrete mixes designed by a testing laboratory and approved by the Consulting Engineer. Conform all mixes to the applicable building code requirement, regardless of other minimum requirements listed herein or on the Plans. Submit mix designs for review before use. Show proportions and specific gravities of cement, fine and coarse aggregate, and water and gradation of combined aggregates.
- B. Reinforcing Steel Shop-Drawings

1.6 QUALITY ASSURANCE

- A. Concrete shall be subject to quality assurance in accordance with Section 90 of the Caltrans Standard Specifications.
1. Slump tests: Have available, at job site, equipment required to perform slump tests. Make one slump test for each cylinder sample, from same concrete batch. Allowable maximum slump shall be 4 inches for walls and 3 inches for slabs on grade and other work.
- B. Certifications:

1. Provide Owner's Representative at the time of delivery with certificates of compliance signed by both Contractor and Supplier containing the following statements:
 - a. Materials contained comply with the requirements of the Contract Documents in all respects.
 - b. Proportions and mixing comply with the design mix approved by the Consulting Engineer. Design mix shall have been field tested in accordance with the herein requirements of the Caltrans Standard Specifications and produces the required compressive strength under like conditions.
 - c. Statement of type and amount of any admixtures.
2. Provide Owner's Representative, at time of delivery, with certified delivery ticket stating volume of concrete delivered and time of mixing, or time of load-out in case of transit mixers.

1.7 DESIGNATION

- A. General: Whenever the 28 day compressive strength is designated herein or on the Plans is 3,600 psi or greater, the concrete shall considered to be designated by compressive strength. The 28 day compressive strength shown herein or on the plans which are less than 3,600 psi are shown for design information only and are not considered a requirement for acceptance of the concrete. Whenever the concrete is designated by class or as minor concrete herein or on the Plans, the concrete shall contain the cement per cubic yard shown in Section 90-2 of the Caltrans Standard Specifications.
- B. Unless specified otherwise herein or on the Plans, portland cement concrete for curbs, gutters, sidewalks and their appurtenances such as island paving, curb ramps and driveways, shall be minor concrete as specified in Section 90-2 of the Caltrans Standard Specifications.

PART 2 - PRODUCTS

2.1 PORTLAND CEMENT

- A. General: Type II or Type V cement conforming to the requirements of ASTM C150. Contractor may substitute pozzolan for portland cement in amounts up to 15% of the required mix unless high early strength concrete is specified. Pozzolan shall consist of Class F Fly Ash meeting the requirements of ASTM C618.
- B. Color: Provide a coloring equivalent to ¼ pound of lampblack per cubic yard. Add to the concrete at the central mixing plant.

2.2 AGGREGATE AND AGGREGATE GRADATION

- A. General: Fine and coarse aggregates shall be ¾ inch maximum size; clean and crushed aggregate free of materials which may cause staining.

Aggregates shall conform to the requirements of section 90-1.02C of the Caltrans Standard Specifications.

- B. Aggregate Size and Gradation: Conform to the requirements of section 90-1.02C(4)(d) of the Caltrans Standard Specifications for 1 inch maximum combined aggregate.

2.3 WATER

- A. General: Water shall be clean, free from injurious amounts of oil, alkali, organic matter, or other deleterious material, and not detrimental to concrete per ASTM C94. Water shall conform to the requirements of section 90-1.02D of the Caltrans Standard Specifications, for mixing and curing portland cement concrete and for washing aggregates.

2.4 CHEMICAL ADMIXTURES

- A. Provide admixtures certified by manufacturer to be compatible with other admixtures and to contain no more than 0.1 percent water-soluble chloride ions by mass of cementitious material. Admixtures shall conform to the requirements of section 90-1.02E of the Caltrans Standard Specifications and as noted herein or on the Plans.
 1. Air-Entraining Admixture: ASTM C260/C260M
 2. Water-Reducing Admixture: ASTM C494/C494M, Type A
 3. Retarding Admixture: ASTM C494/C494M, Type B
 4. Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type D
 5. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F
 6. High-Range, Water-Reducing and Retarding Admixture: ASTM C494/C494M, Type G
 7. Plasticizing and Retarding Admixture: ASTM C1017/C1017M, Type II

2.5 CLASSIFICATION OF PORTLAND CEMENT CONCRETE

- A. Unless specified otherwise herein or on the Plans, portland cement concrete for the following items shall be designated as follows:
 1. Curbs, Gutters, and Sidewalks: Minor concrete.
 2. Cast in Place Concrete Pipe: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.
 3. Thrust Blocks: The concrete shall have a minimum compressive strength of 3,000 psi.
 4. Sign and Fence Footings: The concrete shall consist of a minimum of 376 pounds of portland cement per cubic yard of concrete.
 5. Water, Storm, and Sanitary Structures: The concrete shall consist of a minimum of 564 pounds of portland cement per cubic yard of concrete.

2.6 EXPANSION JOINT MATERIAL

- A. Material for expansion joints in portland cement concrete improvements shall be premolded expansion joint fillers conforming to the requirements of ASTM D1751. Expansion joint material shall be shaped to fit the cross section of the concrete prior to being placed. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site. Unless specified otherwise herein or on the Plans, expansion joint thickness shall be as follows:
1. Concrete Slope Protection, Gutter Lining, Ditch Lining and Channel Lining: ½ inch
 2. Structures: As indicated

2.7 REINFORCEMENT AND DOWELS

- A. Bar reinforcement for concrete improvements shall be deformed steel bars of the size or sizes called for on the plans conforming to the requirements of ASTM A615 for Grade 60 bars. Size and shape for bar reinforcement shall conform to the details shown or called for on the Plans. Substitution of wire mesh reinforcement for reinforcing bars will not be allowed.
- B. Slip dowels, where noted or called for on the Plans or detail drawings shall be smooth billet-steel bars as designated and conforming to the requirements of ASTM A615 for Grade 60 bars. Ends of bars inserted in new work shall be covered with a cardboard tube sealed with cork; no grease or oil shall be used.
- C. Mesh for reinforcement for concrete improvements shall be cold drawn steel wire mesh of the size and spacing called for on the plans conforming to the requirements of ASTM A1064. Size and extent of mesh reinforcement shall conform to the details shown or called for on the plans.
- D. Tie wire for reinforcement shall be eighteen (18) gauge or heavier, black, annealed conforming to the requirements of ASTM A1064.
- E. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site.

2.8 COLOR AND PATTERN FOR DECORATIVE SURFACES

- A. Colors for decorative surfacing shall be CHROMIX admixtures as manufactured by the L. M. Scofield Company, Schedule A-312.05 or approved equal. The specific color shall be as designated or called for on the Plans.
- B. Patterns for decorative surfacing shall be standard "Bomanite" patterns as copyrighted by the Bomanite Corporation of Palo Alto, California or equal. The specific pattern shall be as designated or called for on the Plans.

2.9 CURING AND SEALING MATERIALS

- A. Curing Compounds:
 - 1. Concrete surface repellent-vertical and/or flatwork: Repello surface treatment, invisible chemical treatment barrier system.
 - 2. Curing and sealing-exterior: Colorcure concrete cureseal manufactured by L.M. Scofield Company or approved equal. Color-matched, water-based curing and sealing compound that complies with ASTM C309.
 - 3. Color Conditioned Decorative Portland Cement Concrete: LITHOCHROME colorwax manufactured by L.M. Scofield Company or approved equal. Color-matched, water-based curing and sealing compound that complies with ASTM C309.

2.10 FORMS

- A. Conform to the requirements of Section 73-1.03C and Section 90-1.03B(5) of the Caltrans Standard Specifications.
- B. Tolerance: Not to deviate more than $\frac{1}{4}$ inch in 10 feet in grade and alignment.

2.11 PRECAST CONCRETE STRUCTURES

- A. Conform to the following Sections of Caltrans Standard Specifications:
 - 1. 51-7, Minor Structures
 - 2. 70-5.02, Flared End Sections

2.12 CONCRETE VEHICULAR PAVEMENT

- A. General: See Section 32 13 13, Concrete Pavement.

PART 3 - EXECUTION

3.1 STRUCTURAL EXCAVATION

- A. Structural excavation may be either by hand, or by machine and shall be neat to the line and dimension shown or called for on the plans. Excavation shall be sufficient width to provide adequate space for working therein, and comply with CAL-OSHA requirements.
- B. Where an excavation has been constructed below the design grade, refill the excavation to the bottom of the excavation grade with approved material and compact in place to 95% of the maximum dry density as determined by ASTM D1557.
- C. Remove surplus excavation material remaining upon completion of the work from the job site, or condition it to optimum moisture content and compact it as fill or backfill on the site.

3.2 BRACING AND SHORING

- A. Conform to California OSHA requirements.
- B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.
- C. Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Consulting Engineer for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.
- D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

3.3 PLACING CONCRETE FORMS

- A. Form concrete improvements with a smooth and true upper edge. Side of the form with a smooth finish shall be placed next to concrete. Construct forms rigid enough to withstand the pressure of the fresh concrete to be placed without any distortion.
- B. Thoroughly clean all forms prior to placement and coat forms with an approved form oil in sufficient quantity to prevent adherence of concrete prior to placing concrete.
- C. Carefully set forms to the alignment and grade established and conform to the required dimensions. Rigidly hold forms in place by stakes set at satisfactory intervals. Provide sufficient clamps, spreaders and braces to insure the rigidity of the forms.
- D. Provide forms for back and face of curbs, lip of gutters and edge of walks, valley gutters or other surface slabs that are equal to the full depth of the concrete as shown, noted or called for on the Plans. On curves and curb returns provide composite forms made from benders or thin planks of sufficient ply to ensure rigidity of the form.

3.4 PLACING STEEL REINFORCEMENT

- A. Bars shall be free of mortar, oil, dirt, excessive mill scale and scabby rust and other coatings of any character that would destroy or reduce the bond. All bending shall be done cold, to the shapes shown on the plans. The length of lapped splices shall be as follows:
 - 1. Reinforcing bars No. 8, or smaller, shall be lapped at least 45 bar diameters of the smaller bar joined, and reinforced bars Nos. 9, 10, and 11 shall be lapped at least 60 bar diameters of the smaller bars joined, except when otherwise shown on the plans.
 - 2. Splice locations shall be made as indicated on the plans.
- B. Accurately place reinforcement as shown on the plans and hold firmly and securely in position by wiring at intersections and splices, and by providing precast mortar blocks or ferrous metal chairs, spacers, metal hangers, supporting wires, and other approved devices of sufficient strength to resist crushing under applied loads. Provide supports and ties of such strength and density to permit walking on reinforcing without undue displacement.
- C. Place reinforcing to provide the following minimum concrete cover:
 - 1. Surfaces exposed to water: 4 inches.
 - 2. Surfaces poured against earth: 3 inches.
 - 3. Formed surfaces exposed to earth or weather: 2 inches.
 - 4. Slabs, walls, not exposed to weather or earth: 1 inch.
- D. Minimum spacing, center of parallel bars shall be two and one half (2 ½) times the diameter of the larger sized bar. Accurately tie reinforcing securely in place prior to pouring concrete. Placing of dowels or other reinforcing in the wet concrete is not permitted.

3.5 MIXING AND TRANSPORTING PORTLAND CEMENT CONCRETE

- A. Transit mix concrete in accordance with the requirements of ASTM Designation C94. Transit mix for not less than ten (10) minutes total, not less than three (3) minutes of which shall be on the site just prior to pouring. Mix continuous with no interruptions from the time the truck is filled until the time it is emptied. Place concrete within one hour of the time water is first added unless authorized otherwise by the Owner's Representative.
- B. Do not hand mix concrete for use in concrete structures.

3.6 PLACING PORTLAND CEMENT CONCRETE

- A. Thoroughly wet subgrade when concrete is placed directly on soil. Remove all standing water prior to placing concrete.
- B. Do not place concrete until the subgrade and the forms have been approved.

- C. Convey concrete from mixer to final location as rapidly as possible by methods that prevent separation of the ingredients. Deposit concrete as nearly as possible in final position to avoid re-handling.
- D. Place and solidify concrete in forms without segregation by means of mechanical vibration or by other means as approved by the Owner's Representative. Continue vibration until the material is sufficiently consolidated and absent of all voids without causing segregation of material. The use of vibrators for extensive shifting of fresh concrete will not be permitted.
- E. Concrete in certain locations may be pumped into place upon prior approval by the Owner's Representative. When this procedure requires redesign of the mix, such redesign shall be submitted for approval in the same manner as herein specified for approval of design mixes.

3.7 PLACING ACCESSORY MATERIALS

- A. Place water stops and other items required to be embedded in of portland cement concrete structures at locations shown or required in accordance with Section 51-2.04 of the Caltrans Standard Specifications unless otherwise specifically noted or called for on the Plans.
- B. Curing Compounds:
 - 1. Regular Portland Cement Concrete: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - 2. Color Conditioned Decorative Portland Cement Concrete: Apply in accordance with the manufacturer's written instructions.

3.8 FORM REMOVAL

- A. Remove forms without damage to the concrete. Remove all shores and braces below the ground surface, before backfilling.
- B. Do not backfill against concrete until the concrete has developed sufficient strength to prevent damage.
- C. Leave forms for cast-in-place walls in place at least 72 hours after pouring.
- D. Leave edge forms in place at least 24 hours after pouring.

3.9 DECORATIVE SURFACING CONSTRUCTION

- A. Decorative surfacing concrete walks, concrete median islands or other installations shall be formed and placed as a concrete slab conforming to the details shown or noted on the Plans.

3.10 FIELD QUALITY CONTROL

- A. Finish subgrade for concrete improvements shall be subject to approval prior to placement of forms.
- B. No concrete shall be placed prior to approval of forms.
- C. Concrete improvements constructed shall not contain "bird baths" or pond water and shall be smooth and ridge free.
- D. Conform the finish grade and cross section of concrete improvements to the design grades and cross sections.
- E. Variation of concrete improvements from design grade and cross section as shown or called for on the plans shall not exceed the tolerances ACI 117 and as follows:
 - 1. Elevation: $\frac{1}{4}$ inch.
 - 2. Thickness: Plus $\frac{3}{8}$ inch, minus $\frac{1}{4}$ inch.
 - 3. Surface: Gap below 10 foot long, unlevelled straightedge not to exceed $\frac{1}{4}$ inch.
 - 4. Lateral Alignment and Spacing of Tie Bars and Dowels: 1 inch.
 - 5. Vertical Alignment of Tie Bars and Dowels: $\frac{1}{4}$ inch.
 - 6. Alignment of Tie-Bar End Relative to Line Perpendicular to Pavement Edge: $\frac{1}{2}$ inch.
 - 7. Alignment of Dowel-Bar End Relative to Line Perpendicular to Pavement Edge: Length of dowel $\frac{1}{4}$ inch per 12 inches.
 - 8. Joint Spacing: 3 inches, unless otherwise indicated.
 - 9. Contraction Joint Depth: Plus $\frac{1}{4}$ inch, no minus.
 - 10. Joint Width: Plus $\frac{1}{8}$ inch, no minus.

3.11 RESTORATION OF EXISTING IMPROVEMENTS

- A. Replace in kind all pavement or other improvements removed or damaged due to the installation of concrete improvements.
- B. Remove, landscaping or plantings damaged or disturbed due to the installation of concrete improvements. Replace in kind.

END OF SECTION

SECTION 32 13 75

CONCRETE CURBS AND GUTTERS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Portland cement concrete curbs and gutters, sidewalk, curb ramps and driveways.

1.2 RELATED SECTIONS

- A. Section 31 20 00, Earth Moving
- B. Section 32 11 00, Pavement Base Course
- C. Section 32 13 13, Concrete Pavement
- D. Section 32 13 18, Cement and Concrete for Exterior Improvements

1.3 RELATED DOCUMENTS

- A. American society for Testing and Materials (ASTM)
 - 1. A1064 – Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
 - 2. D1751 – Standard Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
- B. Caltrans Standard Specifications, 2015
 - 1. Section 51: Concrete Structures
 - 2. Section 72: Slope Protection
 - 3. Section 73: Concrete Curbs and Sidewalks
 - 4. Section 90: Concrete

1.4 DEFINITIONS

- A. ASTM: American Society for Testing Materials
- B. ACI: American Concrete Institute

1.5 SUBMITTALS

- A. Concrete Mix Design: Have all concrete mixes designed by a testing laboratory and approved by the Owner. Conform all mixes to the applicable building code requirement, regardless of other minimum requirements listed herein or on the drawings. Submit mix designs for review before use. Show proportions and

specific gravities of cement, fine and coarse aggregate, and water and gradation of combined aggregates.

1.6 QUALITY ASSURANCE

- A. Concrete shall be subject to quality assurance in accordance with Section 90 of the Caltrans Standard Specifications.
- B. Certifications:
 - 1. Provide Owner at the time of delivery with certificates of compliance signed by both Contractor and Supplier containing the following statements:
 - a. Materials contained comply with the requirements of the Contract Documents in all respects.
 - b. Proportions and mixing comply with the design mix approved by the Consulting Engineer. Design mix shall have been field tested in accordance with the herein requirements of the Caltrans Standard Specifications and produces the required compressive strength under like conditions.
 - 2. Settlement of type and amount of any admixtures.
 - 3. Provide Owner, at time of delivery, with certified delivery ticket stating volume of concrete delivered and time of mixing, or time of load-out in case of transit mixers.
- C. Conform to the applicable provisions of Sections 51, 73 and 90 of the Caltrans Standard Specification and these Technical Specifications.
 - 1. Conform construction of portland cement concrete surface improvements (including curbs, gutters, medians, valley gutters, walks) to the requirements of Section 73 of the Caltrans Standard Specifications unless otherwise required in these Technical Specifications or shown on the Plans.
 - 2. Construct "V" ditches in accordance with Section 72-5 of the Caltrans Standard Specifications; except that finishing shall be in accordance with Standard Specification Section 73, or as otherwise required in these Technical Specifications or shown on the Plans.

1.7 DESIGNATION

- A. General: Whenever the 28 day compressive strength is designated herein or on the Plans is 3,600 psi or greater, the concrete shall considered to be designated by compressive strength. The 28 day compressive strength shown herein or on the plans which are less than 3,600 psi are shown for design information only and are not considered a requirement for acceptance of the concrete. Whenever the concrete is designated by class or as minor concrete herein or on the Plans, the concrete shall contain the cement per cubic yard shown in Section 90-2 of the Caltrans Standard Specifications.
- B. Unless specified otherwise herein or on the Plans, portland cement concrete for curbs, gutters, sidewalks and their appurtenances such as island paving,

curb ramps and driveways, shall be minor concrete as specified in Section 90-2 of the Caltrans Standard Specifications.

PART 2 - PRODUCTS

2.1 GENERAL

- A. Comply with requirements of Section 32 13 18, Cement and Concrete for Exterior Improvements.

2.2 PORTLAND CEMENT CONCRETE

- A. Unless specified otherwise herein or on the Plans, portland cement concrete for items in this section shall be Minor Concrete as specified in Section 90-2 of the Caltrans Standard Specifications.
- B. Design mix to produce normal-weight concrete consisting of portland cement, aggregate, water-reducing or high-range water-reducing admixture (superplasticizer), air-entraining admixture, and water to produce the following properties:
 - 1. Compressive Strength:
 - a. Typical: 3000 psi, minimum at 28 days, unless otherwise indicated.
 - b. Curbs & Gutters: 3500 psi, minimum at 28 days.
 - 2. Slump Limit: 8 inches minimum for concrete containing high-range water-reducing admixture (superplasticizer, limited to flatwork only); 4 inches for other concrete.
 - 3. Water/Cement Ratio: 0.5

2.3 CURBS AND GUTTERS FORMS

- A. Use flexible spring-steel forms or laminated boards to form radius bends. Tolerance: Not to deviate more than 1/4 inch in 10 feet in grade and alignment.

2.4 EXPANSION JOINT MATERIAL

- A. Material for expansion joints in portland cement concrete improvements shall be premolded expansion joint fillers conforming to the requirements of ASTM Designation D1751. Expansion joint material shall be shaped to fit the cross section of the concrete prior to being placed. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site.
- B. Unless noted otherwise herein or on the Plans expansion joint thickness shall be as follows:
 - 1. Curbs, Curb Ramps, Island Paving, Driveways and Gutter Depressions: ¼ inch

2.5 REINFORCEMENT AND DOWELS

- A. Comply with requirements of Section 32 13 18, Cement and Concrete for Exterior Improvements.

PART 3 - EXECUTION

3.1 GENERAL

- A. Comply with requirements of Section 32 13 18, Cement and Concrete for Exterior Improvements.
- B. Form, place and finish concrete curbs, gutters, walkways, island paving, valley gutters and driveway approaches in conformance with the applicable requirements of Section 73 of the Caltrans Standard Specifications as modified herein.
- C. Construct new concrete curb, curb and gutter and valley gutters against existing asphalt concrete by removing a minimum of 12 inches of the asphalt concrete to allow placement of curb or gutter forms. Patch pavement with a 6 inch deep lift of asphalt concrete after gutter form is removed.

3.2 SUBGRADE

- A. Conform to Section 73-1.03B of Caltrans Standard Specifications.

3.3 SOIL STERILANT

- A. Furnish and apply an oxidation granular preemergent soil sterilant to prepared subgrade or after installation of rock or aggregate base uniformly at the rate recommended by the manufacturer.

3.4 PLACING CONCRETE FORMS

- A. Form concrete improvements with a smooth and true upper edge. Side of the form with a smooth finish shall be placed next to concrete. Construct forms rigid enough to withstand the pressure of the fresh concrete to be placed without any distortion.
- B. Thoroughly clean all forms prior to placement and coat forms with an approved form oil in sufficient quantity to prevent adherence of concrete prior to placing concrete.
- C. Carefully set forms to the alignment and grade established and conform to the required dimensions. Rigidly hold forms in place by stakes set at satisfactory intervals. Provide sufficient clamps, spreaders and braces to insure the rigidity of the forms.

- D. Provide forms for back and face of curbs, lip of gutters and edge of walks, valley gutters or other surface slabs that are equal to the full depth of the concrete as shown, noted or called for on the Plans. On curves and curb returns provide composite forms made from benders or thin planks of sufficient ply to ensure rigidity of the form.

3.5 PLACING STEEL REINFORCEMENT

- A. Bars shall be free of mortar, oil, dirt, excessive mill scale and scabby rust and other coatings of any character that would destroy or reduce the bond. All bending shall be done cold, to the shapes shown on the plans. The length of lapped splices shall be as follows:
 - 1. Reinforcing bars No. 8, or smaller, shall be lapped at least 45 bar diameters of the smaller bar joined, and reinforced bars Nos. 9, 10, and 11 shall be lapped at least 60 bar diameters of the smaller bars joined, except when otherwise shown on the plans.
 - 2. Splice locations shall be made as indicated on the plans.
- B. Accurately place reinforcement as shown on the plans and hold firmly and securely in position by wiring at intersections and splices, and by providing precast mortar blocks or ferrous metal chairs, spacers, metal hangers, supporting wires, and other approved devices of sufficient strength to resist crushing under applied loads. Provide supports and ties of such strength and density to permit walking on reinforcing without undue displacement.
- C. Place reinforcing to provide the following minimum concrete cover:
 - 1. Surfaces exposed to water: 4 inches
 - 2. Surfaces poured against earth: 3 inches
 - 3. Formed surfaces exposed to earth or weather: 2 inches
 - 4. Slabs, walls, not exposed to weather or earth: 1 inch
- D. Minimum spacing, center of parallel bars shall be two and one half (2 ½) times the diameter of the larger sized bar. Accurately tie reinforcing securely in place prior to pouring concrete. Placing of dowels or other reinforcing in the wet concrete is not permitted.

3.6 PLACING PORTLAND CEMENT CONCRETE

- A. Thoroughly wet subgrade when concrete is placed directly on soil. Remove all standing water prior to placing concrete.
- B. Do not place concrete until the subgrade and the forms have been approved.
- C. Convey concrete from mixer to final location as rapidly as possible by methods that prevent separation of the ingredients. Deposit concrete as nearly as possible in final position to avoid re-handling.
- D. Place and solidify concrete in forms without segregation by means of mechanical vibration or by other means as approved by the Owner. Continue

vibration until the material is sufficiently consolidated and absent of all voids without causing segregation of material. The use of vibrators for extensive shifting of fresh concrete will not be permitted.

- E. Concrete in certain locations may be pumped into place upon prior approval by the Owner. When this procedure requires redesign of the mix, such redesign shall be submitted for approval in the same manner as herein specified for approval of design mixes.

3.7 EXPANSION JOINTS

- A. Construct expansion joints incorporating premolded joint fillers at twenty (20) foot intervals in all concrete curbs, gutters, median/island paving, valley gutters, driveway approaches and at the ends of all returns. At each expansion joint install one-half inch by twelve inch smooth slip dowels in the positions shown or noted on the detail drawings.
- B. Orient slip dowels at right angles to the expansion joint and hold firmly in place during the construction process by means of appropriate chairs.

3.8 WEAKENED PLANE JOINTS

- A. Construct weakened plane joints in concrete curbs, gutters, median/island paving and valley gutters between expansion joints at ten (10) foot intervals throughout, or as otherwise indicated. Depth of joint score depth to be one-fourth (25%) the thickness of the concrete.
- B. Orient slip dowels at right angles to the expansion joint and hold firmly in place during the construction process by means of appropriate chairs.
- C. Grooved Joints: Form weakened plane joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch. Repeat grooving of weakened plane joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.

3.9 FINISHING CONCRETE

- A. Finish curb and gutter in conformance with the applicable requirements of Section 73 of the Caltrans Standard Specifications as modified herein.
- B. Where monolithic curb, gutter and sidewalk is specified, separate concrete pours will not be allowed.
- C. Provide a broom finish to all horizontal surfaces perpendicular to the path of travel on surfaces used by pedestrians:
 - 1. Sloped Less than 6%: Provide a medium salt (medium broom) finish by drawing a soft bristle broom across concrete surface, perpendicular to line of traffic, to provide a uniform fine line texture.

2. Surfaces Sloped Greater than 6%: Provide a slip resistant (heavy broom finish) by striating surface 1/16 inch to 1/8 inch deep with a stiff-bristled broom, perpendicular to line of traffic.

3.10 FORM REMOVAL

- A. Remove forms without damage to the concrete. Remove all shores and braces below the ground surface, before backfilling.
- B. Do not backfill against concrete until the concrete has developed sufficient strength to prevent damage.
- C. Leave edge forms in place at least 24 hours after pouring.

3.11 CONNECTING TO EXISTING CONCRETE IMPROVEMENTS

- A. New curb or gutter is to connect to existing improvements to remain by saw cutting to existing sound concrete at the nearest score line, expansion joint or control joint. Drill and insert ½ inch diameter by 12 inch long dowels at 24 inches on center into existing improvements. Install pre-molded expansion joint filler at the matching joint.
- B. A cold joint to the existing curb is not acceptable.

3.12 FIELD QUALITY CONTROL

- A. Conform the finish grade at top of curb, flow line of gutter, and the finish cross section of concrete improvements to the design grades and cross sections.
- B. Variation of concrete improvements from design grade and cross section as shown or called for on the plans shall not exceed the tolerances established in Section 73 of the Caltrans Standard Specifications.

3.13 RESTORATION OF EXISTING IMPROVEMENTS

- A. Replace in kind all pavement or other improvements removed or damaged due to the installation of concrete improvements.
- B. Remove, landscaping or plantings damaged or disturbed due to the installation of concrete improvements. Replace in kind.

END OF SECTION

SECTION 33 41 00

STORM UTILITY DRAINAGE PIPING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Roadway and/or site storm drainage system up to five feet of any on-site building

1.2 RELATED SECTIONS

- A. Section 31 21 00, Utility Trenching and Backfill
- B. Section 32 13 18, Cement and Concrete for Exterior Improvements

1.3 RELATED DOCUMENTS

- A. AASHTO
 - 1. M199: Precast Reinforced Concrete Manhole Sections
 - 2. M252: Corrugated Polyethylene Drainage Pipe
 - 3. M294: Corrugated Polyethylene Pipe, 12 to 604-inch Diameter
- B. ASTM
 - 1. A74: Cast Iron Soil Pipe and Fittings
 - 2. A615: Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
 - 3. C143: Standard Test Method for Slump of Hydraulic-Cement Concrete
 - 4. C443: Joints for Concrete Pipe and Manholes, Using Rubber Gaskets
 - 5. C478: Circular Precast Reinforced Concrete Manhole Sections
 - 6. C564: Rubber Gaskets for Cast Iron Soil Pipe and Fittings
 - 7. C923: Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
 - 8. C1173: Flexible Transition Couplings for Underground Piping Systems
 - 9. D1785: Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
 - 10. D2321: Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity Flow Applications
 - 11. D2564: Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
 - 12. D3034: Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
 - 13. D4101: Propylene Injection and Extrusion Materials
 - 14. F477: Elastomeric Seals (Gaskets) for Joining Plastic Pipe
 - 15. F656: Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
 - 16. F679: Poly (Vinyl Chloride) (PVC) Large-Diameter Plastic Gravity Sewer Pipe and Fittings

17. F1336: Poly(Vinyl Chloride) (PVC) Gasket Sewer Fittings

C. AWWA

1. C104: Cement-Mortar Lining for Ductile-Iron Pipe and Fittings
2. C105: Polyethylene Encasement for Ductile-Iron Pipe Systems
3. C110: Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. for Water
4. C111: Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings
5. C115: Flanged Ductile-Iron Pipe with Ductile-Iron or Gray-Iron Threaded Flanges
6. C116: Protective Fusion-Bonded Coatings for the Interior and Exterior Surfaces of Ductile-Iron and Gray-Iron Fittings
7. C150: Thickness design of Ductile Iron Pipe
8. C151: Ductile-Iron Pipe, Centrifugally Cast
9. C153: Ductile-Iron Compact Fittings
10. C219: Bolted, Sleeve-type Couplings for Plain-End Pipe
11. M41: Ductile Iron Pipe and Fittings

D. Caltrans Standard Specifications, 2015

1. Section 51, Concrete Structures
2. Section 52, Reinforcement
3. Section 65, Concrete Pipe
4. Section 66, Corrugated Metal Pipe
5. Section 70, Miscellaneous Drainage Facilities
6. Section 72, Slope Protection
7. Section 75, Miscellaneous Metal
8. Section 90, Concrete

E. Caltrans Standard Plans, 2015

1. Plan D94A: Metal and Plastic Flared End Sections
2. Plan D94B: Concrete Flared End Sections
3. Plan D97A: Corrugated Metal Pipe Coupling Details No. 1, Annular Coupling Band Bar and Strap and Angle Connection
4. Plan D97C: Corrugated Metal Pipe Coupling Details No. 3, Helical and Universal Couplers
5. Plan D97D: Corrugated Metal Pipe Coupling Details No. 4, Hugger Coupling Bands
6. Plan D97E: Corrugated Metal Pipe Coupling Details No. 5, Standard Joint
7. Plan D97F: Corrugated Metal Pipe Coupling Details No. 6, Positive Joint
8. Plan D97G: Corrugated Metal Pipe Coupling Details No. 7, Downdrain
9. Plan D98A: Slotted Corrugated Steel Pipe Drain Details
10. Plan D98B: Slotted Corrugated Steel Pipe Drain Details

1.4 DEFINITIONS

A. AASHTO: American Association of State Highway and Transportation Officials

- B. ASTM: American Society for Testing Materials
- C. AWWA: American Water Works Association
- D. CMP: Corrugated metal pipe
- E. DIP: Ductile iron pipe
- F. HDPE: High-density polyethylene
- G. NPS: Nominal pipe size
- H. PE: Polyethylene
- I. PVC: Polyvinyl Chloride
- J. RCP: Reinforced concrete pipe

1.5 SUBMITTALS

- A. Product data for the following:
 - 1. Piping materials and fittings
 - 2. Special pipe couplings
 - 3. Polymer-concrete, channel drainage systems (trench drains)
 - 4. Joint sealants
 - 5. Plastic area drains
 - 6. Cleanout plugs or caps
 - 7. Precast concrete catch basins, inlets, curb inlets, junction structures and area drains, including frames and grates
 - 8. Precast clean out boxes and box covers
 - 9. Concrete, metal and plastic flared end sections
- B. Shop drawings: Include plans, elevations, details and attachments for the following:
 - 1. Precast concrete manholes, frames and covers
- C. Design Mix Reports and Calculations: For each class of cast in place concrete
- D. Field Test Reports: Indicate and interpret test results for compliance with performance.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Delivery and Storage
 - 1. Piping: Inspect materials delivered to site for damage; store with minimum of handling. Store materials on site in enclosures or under protective coverings. Store plastic piping and jointing materials and rubber gaskets under cover out of direct sunlight. Do not store materials

directly on the ground. Keep inside of pipes and fittings free of dirt and debris.

2. Metal Items: Check upon arrival; identify and segregate as to types, functions, and sizes. Store off the ground in a manner affording easy accessibility and not causing excessive rusting or coating with grease or other objectionable materials.
- B. Handling
1. Handle pipe, fittings, and other accessories in such manner as to ensure delivery to the trench in sound undamaged condition. When handling lined pipe, take special care not to damage linings of pipe and fittings; if lining is damaged, make satisfactory repairs. Carry, do not drag, pipe to trench.
 2. Handle precast concrete pipe, manholes and other precast structures according to manufacturer's written instructions.
 3. Protect imported bedding and backfill material from contamination by other materials.

PART 2 - PRODUCTS

2.1 PE PIPE AND FITTINGS (HDPE): 4 INCH THROUGH 10 INCH

- A. Pipe shall be in accordance with AASHTO M252 Type S, smooth interior and corrugated exterior
- B. Bell and spigot joints
- C. Bell and Spigot Joint Gasket: Elastomeric seal, ASTM F477
- D. Couplings: AASHTO M252, corrugated band type, engage a minimum of 4 corrugations, 2 on each side of pipe joint

2.2 PE PIPE AND FITTINGS (HDPE): 12 INCH THROUGH 48 INCH

- A. Pipe shall be in accordance to AASHTO M294. Type S, smooth interior and corrugated exterior.
- B. Bell and spigot joints
- C. Bell and Spigot Joint Gasket: Elastomeric seal, ASTM F477
- D. Couplings: AASHTO M252, corrugated band type, engage a minimum of 4 corrugations, 2 on each side of pipe joint

2.3 PVC PIPE AND FITTINGS-SMALLER THAN 4 INCH

- A. Pipe shall be in accordance to ASTM D1785, Schedule 40. [Check external load and laying condition, schedule 80 and 120 are also available if stronger pipe is required.]

- B. Joints: Solvent Cement, ASTM D2564
- C. Include primer according to ASTM F656
- D. Special Pipe Coupling: ASTM C1173. Rubber or elastomeric sleeve and band assembly fabricated to match outside diameters of pipes to be joined.

2.4 PVC PIPE, 4 INCH AND LARGER

- A. Pipe
 - 1. 4 inch through 15 inch: ASTM D3034, SDR 35
 - 2. 18 inch through 36 inch: ASTM F679, T-1 wall
- B. Bell and spigot joints
- C. Fittings:
 - 1. 4 inch through 27 inch: ASTM F1336
 - 2. 30 inch through 36 inch: ASTM D3034, SDR 35
- D. Joint Gasket: Elastomeric seal, ASTM F477
- E. Special Pipe Coupling: ASTM C 1173. Rubber or elastomeric sleeve and band assembly fabricated to match outside diameters of pipes to be joined

2.5 REINFORCED CONCRETE PIPE

- A. Designated by Class, rubber gasketed joints, Type II or V cement
 - 1. Circular Reinforced Concrete Pipe: Caltrans Standard Specification Section 65-2.02C(2). Class III
 - 2. Oval shaped (Elliptical) Reinforced Concrete Pipe: Caltrans Standard Specification Section 65-2.02D. Class HE-III and VE-III
- B. Rubber Gasketed Joints: Caltrans Standard Specification Section 65-2.02F
- C. Special Pipe Couplings: Portland cement collar as indicated

2.6 PIPE ANCHORS

- A. General: Location, configuration bearing area, etc. as indicated
- B. Portland Cement Concrete: Section 32 13 18, Cement and Concrete for Exterior Improvements

2.7 PIPE CLEANOUTS

- A. Piping: Same as storm drain line if possible
- B. Top Plug or Cap: Same material as piping if possible. Plug or cap to be secure but removable, threaded or non-threaded.

- C. Box Size: As required to provide access and allow easy removal and reinstallation of cap
- D. Box Types
 - 1. Non-Traffic Areas: Portland cement concrete box and box cover, light duty
 - 2. Traffic Areas: Portland cement concrete box and box cover or steel or cast iron cover, heavy duty, both box and cover to be rated for AASHTO H20 loading
- E. Box Cover Markings: "S.D.," unless otherwise specified
- F. Available Manufacturers: Subject to compliance with requirements, box manufacturers offering products that may be incorporated into the Project include, but are not limited to the following:
 - 1. Associated Concrete Products, Inc.
 - 2. Brooks Products Inc.
 - 3. OldCastle Precast/Christy Concrete Products, Inc.

2.8 AREA DRAINS

- A. Grate and Riser: Area drain shall be as manufactured by Nyloplast or approved equal. Riser shall be constructed of 6 inch PVC SDR 35 piping per paragraph 2.1(A) of this section and connected to area drain by a gasket joint. Riser shall be vertical except as otherwise noted in the plans. Riser may include a reducer if necessary to make connection to the storm drain line.
- B. Elevation and Grading: Area Drain rim elevation shall be set and area around area drain shall be graded to drain away from any adjacent structures, walks, or roadways and towards area drain.

2.9 CURB INLETS, CATCH BASINS, DROP INLETS, JUNCTION STRUCTURES, AREA DRAINS, ETC.

- A. General: Size, shape, configuration, depth, etc. of structure and frame, grate, or cover shall be as indicated.
- B. Portland Cement Concrete and Reinforcing: Section 32 13 18, Cement and Concrete for Exterior Improvements.
- C. Precast Structure: Rate for AASHTO H20 loading in traffic areas.
- D. Steps: ASTM C 478 or AASHTO M199. Manufacture from deformed, ½ inch steel reinforcement rod complying with ASTM A615 and encased in polypropylene complying with ASTM D4101. Include pattern designed to prevent lateral slippage off step. Acceptable manufacturer is Hanson Concrete Products, (Milpitas, CA) (Tel 408-262-1091).

- E. Frames, Grates and Covers: Caltrans Standard Specification Section 75-1.02, 75-1.02.B and 75-2
 - 1. Galvanize steel frames, grates and covers
 - 2. Grates and covers shall be non-rocking
 - 3. Rate for AASHTO H20 loading in traffic areas

2.10 MANHOLES

- A. Manholes shall be pre-cast concrete of the size and shape shown on the Plans and shall conform to ASTM C478. Equivalent poured-in-place structures may be used at the Contractor's option. Concrete shall consist of Caltrans Type I/II cement. Rate for AASHTO H20 loading in traffic areas.
- B. All interior concrete surfaces shall be coated with "Xypex Crystalline" or approved equivalent. Use of a water-resistant admix is acceptable, at Contractor option.
- C. Frames and Covers: As indicated and in accordance with Caltrans Standard Specification Section 75-2.02B. Manhole covers shall have the words "STORM DRAIN" in letters not less than 2 inches cast into the cover. The clear opening for all manhole covers shall be 24 inches.
- D. Frames and lids for manholes shall be match-marked in pairs before delivery to the job site. The lids shall fit into their frames without rocking.
- E. Reinforcing Bars: Reinforcing bars shall be of intermediate grade billet steel conforming to ASTM A615 and shall be of the size shown on the Standard Details or in the Plans. Bars shall be of the round deformed type, free from injurious seams, flaws, or cracks, and shall be cleaned of all rust, dirt, grease and loose scales.
- F. Portland Cement Concrete: Concrete for manhole bases, inlets, and other concrete structures shall conform to the requirements of Caltrans Standard Specifications Section 90 and as herein specified. The concrete shall be Class "A" containing six (6) sacks of portland cement per cubic yard of concrete. The grading of the combined aggregate shall conform with the CDT requirements of the three-quarter inch maximum. The consistency of the fresh aggregate shall be such that the slump does not exceed four inches, as determined by ASTM C143. The concrete shall have a minimum design compressive strength of 3,000 psi after 28 days.
- G. Steps: ASTM C478 or AASHTO M199. Manufacture from deformed, ½ inch steel reinforcement rod complying with ASTM A615 and encased in polypropylene complying with ASTM D4101. Include pattern designed to prevent lateral slippage off step. Acceptable manufacturer is Hanson Concrete Products, or approved equal.

2.11 JOINT SEALANT FOR PRECAST STRUCTURES AND MANHOLES

- A. Mortar: Caltrans Standard Specification Section 51-1.02F
 - 1. Use to seal around pipes at connections to structures and manholes. Also use to seal joints between precast sections of structures and manholes.
- B. Gaskets: Preformed flexible rubber or plastic gasket
 - 1. Rubber Gaskets: ASTM C443
 - 2. Plastic Gaskets: Federal Specification SS-S-00210 (GSA-FSS), Type I, Rope Form; or alternate standard which may exist. Acceptable material is "Ram-Nek," as manufactured by Henry Company, or approved equal.

2.12 PIPE TO STRUCTURE CONNECTOR/SEAL

- A. A flexible pipe to manhole connector shall be used for all pipe penetrations to pre-cast and/or cast-in-place concrete structures.
 - 1. The seal shall provide a flexible, positive, watertight connection between pipe and concrete wastewater structures. The connector shall assure that a seal is made between (1) the connector and the structure wall, and (2) between the connector and the pipe. The seal between the connector and the manhole wall shall be made by casting the connector integrally with the structure wall during the manufacturing process in such a manner that it will not pull out during coupling. The seal between connector and pipe will be made by way of a stainless steel take down band compressing the gasket against the outside diameter of the pipe.
 - 2. The connector shall be molded from materials whose physical/chemical properties meet or exceed the physical/chemical resistant properties outlined in ASTM C923. The connector and stainless steel hardware shall meet or exceed the performance requirements proscribed in ASTM C923.
 - 3. The connector shall be of size specifically designed for the pipe material being used and shall be installed in accordance with recommendations of the manufacturer.
 - 4. Connectors shall be Z-LOK or G3 connectors manufactured by A-LOK Products Inc. or approved equivalent.

2.13 POLYMER-CONCRETE TRENCH DRAINS

- A. General: Modular system of precast, polymer-concrete channel sections, grates, and appurtenances; designed so grates fit into channel recesses without rocking or rattling. Include number of units required to form total length required.
- B. Include the following components:
 - 1. Channel Sections: Interlocking-joint, precast modular units with end caps. Inside width as indicated with deep, rounded bottom, with built in

- slope or flat invert as indicated and outlets in number, sizes, and locations indicated. Include extension sections necessary for required depth.
2. Frame and Grate: Gray iron, ductile iron or galvanized steel as indicated. Where drain is located in traffic areas, rate for AASHTO H20 loading.
- C. Locking Mechanism: Manufacturer's standard device for securing grates to channel sections.
 - D. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Project include, but are not limited to, the following:
 1. "Polydrain" by ABT Inc.
 2. "ACO Drain" by ACO Polymer Products Inc. , or approved equal

2.14 METAL, CONCRETE OR PLASTIC FLARED END SECTIONS

- A. General: Caltrans Standard Specification Section 70-5.02 and Caltrans Standard Plan D94A and D94B

PART 3 - EXECUTION

3.1 PIPE INSTALLATION

- A. General: Install pipe, fittings, and appurtenances utilizing best practices, manufacturer's instructions, and in accordance with Section 6 and 7 of ASTM D 2321 for plastic pipe, Caltrans Standard Specification Section 65-2.03 for reinforced concrete pipe, Caltrans Standard Specification Section 66-1.03 for corrugated metal pipe, and chapter 11.3.3 of AWWA M41 for cast iron and ductile iron pipe.
- B. Pipe Depth and Trench Configuration: Conform to typical trench section(s) indicated.
- C. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill
- D. Handling: Carefully handle during loading, hauling, unloading and placing operations to avoid breakage or damage. Use strap type slings for lifting and placing; no chains or hooks will be permitted. Comply with the manufacturer's recommendations.
- E. Laying: Before lowering pipe into the trench, remove all stakes, debris, loose rock and other hard materials from the bottom of the trench. Lay accurately in conformance with lines and grades indicated. Start laying the pipeline at the low end and proceed upstream. Lay bell and spigot pipe with the bell end facing upstream. Lay pipe on a bed prepared by handwork, dug true to grade. Furnish firm bearing for pipe throughout its entire length with bell holes provided at the

ends of each pipe length of sufficient size to permit making up the particular type of joint being used. Adjust pipe to line and grade by scraping away or filling and tamping material under the body of the pipe for the entire pipe length and not by blocking or wedging. After final positioning, hold pipe in place in trench with backfill material placed equally on both sides of the pipe at as many locations as required to hold the pipe section in place.

- F. Curved Alignment: When necessary to conform to the alignment specifically indicated, lay pipe on a curved alignment by means of asymmetrical closure of joints or bending of the pipe barrel. Use shorter lengths of pipe than the standard length if necessary to achieve curvature specified. Do not exceed the recommendations of the pipe manufacture for deflections at the joints or pipe bending.
- G. Closure: Close open ends of pipes and appurtenance at the end of each day's work or when work is not in progress.

3.2 SPECIAL PIPE COUPLINGS

- A. General: Use where required to join piping and no other appropriate method is specified. Do not use instead of specified joining methods.
- B. Installation: Manufacturers' instructions

3.3 INSTALLATION OF CURB INLETS, CATCH BASINS, DROP INLETS, JUNCTION STRUCTURES, AREA DRAINS, ETC. AND MANHOLES

- A. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill
- B. Poured in Place Structures: Install as indicated and Caltrans Standard Specification Section 51.
 - 1. Shape bottoms to convey flows as indicated.
- C. Precast Structures: Install as indicated.
 - 1. Seal all joints and pipe entrances and exits.
 - 2. Place concrete in bottom and shape to convey flows as indicated.

3.4 POLYMER-CONCRETE TRENCH DRAIN INSTALLATION

- A. Excavation, Bedding, Backfill, and Compaction: Section 31 21 00, Utility Trenching and Backfill
- B. Install: As indicated and in accordance with the manufacturer's instructions.
 - 1. course.

3.5 PIPELINE FLUSHING

- A. Newly constructed storm drain pipes shall be flushed with water to clean. A metal screen shall be used to collect and remove any rock, silt and other debris that is flushed out during cleaning.

3.6 DEFLECTION TESTING

- A. Upon completion of work, perform a deflection test on entire length of installed plastic pipeline. Completed work includes superimposed loads adjacent to and over the pipeline, such as compacted backfill and earthwork, and does not include paving, concrete curbs and gutters, sidewalks, walkways, and landscaping.
- B. Under external loads, deflection of pipe in the installed pipeline shall not exceed 4.5 percent of the average inside diameter of pipe.
- C. Determine whether the allowable deflection has been exceeded by use of a pull-through device or a deflection-measuring device.
- D. Pull-Through Device:
 - 1. Provide a spherical, spheroidal, or elliptical ball, a cylinder, or circular sections fused to a common shaft.
 - a. Circular sections shall be so spaced on the shaft that distance from external faces of front and back sections will equal or exceed diameter of the circular section.
 - b. Pull-through device may also be of a design approved by the Uni-Bell Plastic Pipe Association, provided that the device meets the applicable requirements specified in this paragraph, including those for diameter of the device.
 - 2. Ball, cylinder, or circular sections shall conform to the following:
 - a. A diameter, or minor diameter as applicable, of 95 percent of the average inside diameter of the pipe; tolerance of plus 0.5 percent will be permitted.
 - b. A homogeneous material throughout, with a density greater than 1.0 as related to water at 39.2 degrees F, and a surface Brinell hardness of not less than 150.
 - c. Center bored and through bolted with a ¼ inch minimum diameter steel shaft having a yield strength of not less than 70,000 pounds per square inch, with eyes or loops at each end for attaching pulling cables.
 - d. Each eye or loop shall be suitably backed with a flange or heavy washer such that a pull exerted on opposite end of shaft will produce compression throughout remote end.
 - 3. Pull-Through Device:

- a. Pass the pull-through device through each run of pipe, either by pulling it through or flushing it through with water.
 - b. If the device fails to pass freely through a pipe run, replace pipe which has the excessive deflection and completely retest in same manner and under same conditions as specified.
- E. Deflection measuring Device:
1. Sensitive to 1.0 percent of the diameter of the pipe being tested and accurate to 1.0 percent of the indicated dimension.
 2. Obtain approval of deflection measuring device prior to use.
- F. Deflection Measuring Device Procedure:
1. Measure deflections through each run of installed pipe.
 2. If deflection readings in excess of 4.5 percent of average inside diameter of pipe are obtained, retest pipe by a run from the opposite direction.
 3. If retest continues to show a deflection in excess of 4.5 percent of average inside diameter of pipe, remove pipe which has excessive deflections, replace with new pipe, and completely retest in same manner and under same conditions.
- G. Warranty Period Test: Pipe found to have a deflection of greater than 5 percent of average inside diameter when deflection test is performed just prior to end of 1 year warranty period shall be replaced with new pipe and tested as specified for leakage and deflection.

3.7 CLEANING

- A. Thoroughly clean storm drain lines, manholes, catch basins, field inlets, culverts, and similar structures, of dirt, debris, and obstructions of any kind.

3.8 TELEVISION INSPECTION

- A. After completion of the pipe installation, service connections, flushing and cleaning, and prior to placement of pavement, the drain line shall be televised with a color closed-circuit television with tilt-head camera recorded in DVD format. The original disc and log sheets shall be provided to the Owner for review.
- B. The following observations from television inspections will be considered defects in the construction of sewer pipelines and will require correction prior to placement of pavement:
1. Low spot (1 inch or greater - mainlines only)
 2. Joint separations (3/4 inch or greater opening between pipe sections)
 3. Cocked joints present in straight runs or on the wrong side of pipe curves.
 4. Chips in pipe ends

5. Cracked or damaged pipe
6. Dropped joints
7. Infiltration
8. Debris or other foreign objects
9. Other obvious deficiencies
10. Irregular condition without logical explanation

END OF SECTION

SECTION 33 46 00

SUBDRAINAGE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Subdrains in trenches and subdrains or prefabricated composite drainage panels at walls or foundations
- B. Bioretention and biofiltration areas for storm water treatment

1.2 RELATED SECTIONS

- A. Section 31 23 33, Utility Trenching and Backfill
- B. Section 33 41 00, Storm Utility Drainage Piping

1.3 RELATED DOCUMENTS

- A. AASHTO
 - 1. M288: Standard Specification for Geotextiles Used for Subsurface Drainage Purposes
- B. ASTM
 - 1. C1173: Standard Specification for Flexible Transition Couplings for Underground Piping Systems
 - 2. D448: Standard Classification for Sizes of Aggregate for Road and Bridge Construction
 - 3. D1621: Standard Test Method for Compressive Properties of Rigid Cellular Plastics
 - 4. D1785: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120
 - 5. D2321: Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
 - 6. D2564: Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
 - 7. D2729: Standard Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
 - 8. D3034: Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings
 - 9. D4716: Standard Test Method for Determining the (In-Plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head
 - 10. F477: Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
 - 11. F656: Standard Specification for Primers for Use in Solvent Cement Joints of Poly(Vinyl Chloride) (PVC) Plastic Pipe and Fittings

12. F1336: Standard Specification for Poly(Vinyl Chloride) (PVC) Gasket Sewer Fittings

- C. Caltrans Standard Specifications, 2015
 - 1. Section 68-Subsurface Drains
 - 2. Section 96-Geosynthetics

1.4 DEFINITIONS

- A. AASHTO: American Association of State Highway and Transportation Officials
- B. ASTM: American Society for Testing and Materials
- C. PVC: Polyvinyl Chloride

1.5 SUBMITTALS

- A. Follow submittal procedure in accordance with Section 01 10 00, Supplemental General Requirements.
- B. Product data for the following:
 - 1. Perforated pipe and fittings
 - 2. Solid pipe and fittings
 - 3. Prefabricated composite drainage panels
 - 4. Geotextile fabrics
 - 5. Cleanout plugs or caps
 - 6. Precast clean out boxes and box covers
 - 7. Drainage bubblers
 - 8. Biofiltration soil material
- C. Samples:
 - 1. Drainage Fill

1.6 DELIVERY, STORAGE AND HANDLING

- A. Do not store plastic structures, pipe, and fittings in direct sunlight.
- B. Protect pipe, pipe-fittings, and seals from dirt and damage.
- C. Protect permeable material from contamination by other materials.

PART 2 - PRODUCTS

2.1 PERFORATED WALL AND SOLID WALL PIPE

- A. PVC pipe and Fittings Smaller than 4-inch:
 - 1. Pipe: ASTM D1785, Schedule 40. Solvent cement joints
 - 2. Solvent Cement: ASTM D2564. Include primer according to ASTM F656.
 - 3. Perforation Size, Location, and Spacing: ASTM D2729

- B. PVC Pipe and Fittings 4-inch through 15-inch:
 1. Pipe: ASTM D3034, SDR 26. Bell and spigot joints
 2. Perforation Size, Location, and Spacing: ASTM D2729
 3. Fittings: ASTM F1336
 4. Joint Gasket: Elastomeric seal, ASTM F477

2.2 SPECIAL PIPE COUPLINGS

- A. Description: ASTM C1173. Rubber or elastomeric sleeve and stainless steel band assembly fabricated to match outside diameters of pipes to be joined.

2.3 CLEANOUTS

- A. Piping: Same as subdrain pipe without perforations.
- B. Top Plug or Cap: Same material as piping if possible. Plug or cap to be secure but removable, threaded or non-threaded.
 1. Size box to provide access and allow easy removal and reinstallation of plug or cap.
 2. Types:
 - a. Non-Traffic Areas: Portland cement concrete box and box cover, light duty.
 - b. Traffic Areas: Portland cement concrete box and box cover or steel or cast iron cover, heavy duty, both box and cover to be rated for AASHTO H20 loading.
- C. Cover Markings: "STORM DRAIN" unless otherwise specified.
 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Project include, but are not limited to, the following:
 - a. Associated Concrete Products, Inc.,
 - b. Brooks Products Inc.,
 - c. Christy Concrete Products, Inc., or approved equal

2.4 PREFABRICATED COMPOSITE DRAINAGE PANELS

- A. Description: Prefabricated composite panels, 36 to 60 inches wide and manufactured with geotextile facing laminated to molded drainage core
- B. Drainage Core: Three-dimensional, non-biodegradable, molded Polypropylene or Polystyrene
 1. Minimum Compressive Strength: 10,000-lbf./sq. ft. when tested according to ASTM D1621
 2. Minimum Flow Rate: 2.8 gpm per foot at hydraulic gradient of 0.05 and compressive stress of 25 psig when tested according to ASTM D4716
- C. Geotextile: Non-woven needle-punched geotextile, manufactured for subsurface drainage, made from polyolefins or polyesters; with elongation

greater than 50 percent; complying with the following properties determined according to AASHTO M288

1. Survivability Class: 1
2. Apparent Opening Size: No. 70 sieve maximum
3. Permittivity: 0.5 per second, minimum

D. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Project include, but are not limited to, the following:

1. American Wick Drain Corporation
2. Tencate Geosynthetics/Mirafi Inc.
3. Multi-Flow (Prinsburg, MN) (Tel. 800-978-8007)
4. Phillips Fibers Corporation, or approved equal

2.5 BIORETENTION OR BIOFILTRATION TREATMENT SOIL

A. Soil specification shall meet requirements of local agency having authority or sustainability requirements for projects achieving environmental goals.

1. For projects located within the jurisdiction of the Municipal Regional Stormwater Permit (MRP), treatment soil shall conform to requirements in Appendix L of the MRP. Contractor shall provide submittal information verifying conformance to MRP standard.

2.6 DRAINAGE FILL MATERIAL

A. Permeable Material: Conform to Section 68-2.02F(3) of Caltrans Standard Specifications, Class 2.

B. Washed, evenly graded mixture of crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate, Sieve No. 57, with 100 percent passing 1-1/2-inch sieve and not more than 5 percent passing No. 8 sieve

2.7 GEOSYNTHETICS

A. When required, use filter fabric for encasing permeable material around subdrains.

1. Caltrans Filter Fabric: Section 96-1.02B of Caltrans Standard Specifications,
2. Mirafi 140N (by Tencate Geosynthetics/Mirafi Inc.), or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and areas for suitable conditions where subdrainage systems are to be installed.

B. Install only after unsatisfactory conditions have been corrected.

3.2 PIPING APPLICATIONS

- A. Refer to Plans for location, size, and material designation for individual subdrains.

3.3 INSTALLATION OF PERFORATED PORTIONS OF SUBDRAINS

- A. Excavation: Section 6 of ASTM D2321 and as indicated.
- B. Subdrain Bedding: Place supporting layer of drainage fill over compacted subgrade to compacted depth indicated. If drainage fill requires encasement in filter fabric, lay filter fabric in trench and overlap trench sides before installing drainage fill.
- C. Piping Installation: Install pipe in accordance with Section 7 of ASTM D2321. Install piping beginning at low point of system, true to grades and alignment indicated, with unbroken continuity of invert. Excavate recesses for bottoms of bell ends of pipe. Lay pipe with bells facing upslope and with spigot end centered fully into adjacent bell. Bed piping with full pipe bearing in drainage fill material. Lay perforated pipe with perforations down. Install gaskets, seals, sleeves, and couplings in accordance with manufacturers written instructions. Use increasers, reducers, and couplings made for different sizes of materials of pipes and fittings being connected. Reduction of pipe size in direction of flow is prohibited.
- D. Initial Subdrain Backfill: After installing drainage piping, add drainage fill up to top of pipe to perform tests.
- E. Testing Subdrain: After installing drainage fill to top of pipe, test drain piping with water to ensure free flow before backfilling with drainage fill. Remove obstructions, replace damaged components, and repeat test until results are satisfactory.
- F. Subsequent Subdrain Backfill: After satisfactory testing, cover piping with drainage fill to width and height indicated. Place drainage fill in layers not exceeding 3 inches in loose depth; compact each layer placed. If filter fabric is required complete the filter fabric encasement by bringing fabric to top and closing the encasement.
- G. Fill to Grade: Place native fill material over compacted drainage fill to thickness indicated. Place material in loose-depth layers not exceeding 6 inches. Thoroughly compact each layer. Fill to finish elevations.

3.4 INSTALLATION OF NON-PERFORATED PORTIONS OF SUBDRAINS

- A. Conform to Sections 31 23 33, Utility Trenching and Backfill and 33 41 00, Storm Utility Drainage Pipe.

3.5 INSTALLATION OF RAIN GARDENS, BIORETENTION OR BIOFILTRATION TREATMENT AREAS

- A. The Contractor shall excavate rain gardens / treatment areas to the elevations and dimensions specified on the plans. Level surface of area of top of treatment soil shown on the plans shall govern actual length and width dimensions if shown on the plans. In-situ soils shall not be further compacted.
- B. Direct the use of heavy equipment and construction traffic around rain gardens so as to avoid compaction, to the extent possible.
- C. After initial site grading, the Contractor shall provide temporary protection from curb cuts and other potential inflow entrances so that runoff drainage does not enter the rain gardens during construction and installation.
 - 1. Treatment areas / rain gardens may be used as sediment settling facilities during mass excavation and commensurate construction activities.
 - 2. Prior to commencing work in rain gardens, the Contractor shall remove and properly dispose of all accumulated sediments.
- D. Excavated soils shall be placed with stockpiled fill and properly disposed and stabilized by the Contractor.
- E. Subdrain installation:
 - 1. Subdrain shall be installed as indicated on the plans at an elevation within the drain rock layer shown on the construction details and connected to the overflow or outfall structure at the invert elevation shown on the plans.
 - 2. For connections of the perforated drain pipes to storm drainage structures, appropriately sized holes shall be cut in the structures at the correct invert elevation specified by the Project Designer or authorized representative. The connections shall be sealed sediment-tight and secured in place with mortar or other approved joint sealant compatible with subdrain pipe materials.
 - 3. Drain rock layer shall be approved Class II Permeable Material. Crushed rock or aggregate base cannot be used within the treatment area, in, around or under the drain rock layer.
 - 4. Care shall be exercised to prevent natural or fill soils from intermixing with the drain rock surrounding the underdrain. All contaminated drain rock shall be removed and replaced with uncontaminated Class II permeable material.
 - 5. Attach subdrain piping to overflow structure.
 - 6. Install cleanouts at the ends of the subdrains. Install screw-on end caps set flush with the finished top of treatment soil.
- F. Overflow drain structure:
 - 1. Install overflow structure at the elevation and location specified on the plans. Attach subdrain piping to overflow structure. Attach solid pipe

- from overflow structure outfall storm drain system at elevation and slope indicated on the plans.
2. Rim elevation of overflow structure must be set above the elevation of the top of treatment soil by the amount indicated on the plans, typically 6 inches. Contractor shall verify that the rim elevation of the overflow structure is also a minimum of 2 inches below the lowest elevation of the treatment area perimeter so that storm flows will reach the overflow rim before the top of the treatment area perimeter.
 3. The overflow structure shall have an open bottom filled with drain rock if indicated on the plans. This should be installed where the overflow structure has a sump condition (subdrains lower than the outfall invert elevation). The overflow structure shall be installed such that the bottom of the structure is set a minimum of 6-inches below the undisturbed bottom of the treatment area. Drain rock in the overflow sump shall be installed up to the invert of the lowest pipe connected to the structure.
- G. Filter media soil backfill
1. Filter soil of the approved specification shall be installed to the elevation indicated on the plans. Care should be taken to ensure that the soil is not compacted and that no equipment is driven on the backfill. Walking on the backfill should be limited to what is absolutely necessary.
- H. Planting soil, plantings, and mulch shall be installed per the plans. Non-floating bark / mulch shall be used, if indicated, to prevent removal of material and clogging of the overflow.
- I. Testing of the treatment area should be conducted once the filter media is installed and all storm drain piping is connected. The area should allow an infiltration rate well above 5 inches/ hour to ensure that the treatment area will continue to function at 5 inches/ hour over the lifetime of the treatment area.

3.6 PREFABRICATED COMPOSITE DRAINAGE PANELS

- A. Coordinate placement with other drainage materials.
- B. Install prefabricated drainage panels in accordance with manufacturer's instructions.
- C. Place perforated drainage pipe at base of footing and attach to composite drainage panels in accordance with the manufacturer's instructions.

3.7 JOINING PIPE

- A. Join PVC pipe and fittings with elastomeric seals according to ASTM D2321 or solvent cement.

- B. Special pipe couplings: Join piping made of different materials and dimensions with special couplings made for this application. Use couplings that are compatible with and that fit both pipe materials and dimensions.

3.8 CLEANOUT INSTALLATION

- A. Cleanout piping to be the same size as the subdrain piping to which it is attached.
- B. Install cleanouts from subdrainage piping to grade. Locate cleanouts at beginning of piping run, at changes in direction, and other locations indicated.
- C. Do not allow cleanout box to bear on cleanout riser.

3.9 CLEANING

- A. Clear interior of installed piping and structures of dirt and other superfluous material as work progresses. Maintain swab or drag in piping and pull past each joint as it is completed. Place plugs in ends of uncompleted pipe at end of each day or when work stops.

3.10 RETAINING WALL DRAINAGE

- A. Unless otherwise specified, drain system should consist of a minimum of 12 inches thick free-draining granular materials containing less than five percent fines passing a No. 200 sieve placed adjacent to the wall. Free-draining granular material should be graded to prevent the intrusion of fines or encapsulated in a suitable filter fabric. As an alternative, a prefabricated drainage structure, such as geo-composite, or approved equivalent, may be used as a substitute for the granular backfill adjacent to the wall.
- B. Drainage system consisting of either weep holes or perforated drain lines (minimum 4 inch diameter placed near the base of the wall) should be used to intercept and discharge water which would tend to saturate the backfill. Where used, drain lines should be embedded in a uniformly graded filter material and provided with adequate clean-outs for periodic maintenance.
- C. An impervious soil should be used in the upper one foot layer of backfill to reduce the potential for water infiltration.

END OF SECTION