

FAIRFIELD CAMPUS POOL DECK REPLACMENT PROJECT

PROJECT MANUAL

PROJECT NUMBER: 23-006

DSA NUMBER: 02-120573

SOLANO COMMUNITY COLLEGE DISTRICT

FEBRUARY 1st, 2023

Specifications Project No. 2022013

Solano CCD Fairfield Pool Deck Replacement

4000 Suisun Valley Road Fairfield, CA 94534

Solano Community College District 360 Campus Lane Fairfield, CA 94534

> DSA Application # 02-120573

DSA Submittal



808 R Street Suite 201 Sacramento, CA 95811 916 970 0230

Owner

Solano Community College District 360 Campus Lane Fairfield, CA 94534

Architect

Aedis Architects 808 R Street Suite 201 Sacramento, CA 95811 916 970 0230

Civil Engineer

Carroll Engineering 1101 S. Winchester Blvd. Suite H-184 San Jose, CA 95128-3903 408 267 9800

Structural Engineer

Response Engineering 5441fair Oaks Blvd, Suite G2 Carmichael, Ca 95608 916.680.9922

Mechanical Engineer

Peters Engineering 7750 College Town Dr., Suite 101 Sacramento CA 95826 (916) 712-0492

Electrical Engineer

Edge Electrical Consulting 1801 7th Street, Suite 150 Sacramento, Ca 95811 (916) 256-2460

Aquatic Consultant

Aquatic Design Group, Inc. 2226 Faraday Ave. Carlsbad, CA 92008 760 438 5251

Specifications Project No. 2022013

DSA File No. 48-C DSA Application No. 02 –120573

Solano CCD Fairfield Pool Deck Replacement

Solano Community College District Solano County, CA

> Aedis Architects 808 R Street Suite 201 Sacramento, CA 95811 916 970 0230

Division of the State Architect Office of Regulation Services



Gregory S. Ferrell, NCARB AIA

Aquatic Design Group, Inc

M31176 EXP. 12/31/23

Sean R. Tichenoz

Name, Mechanical Engineer
Peters Engineering



Joe Vela, Architect Aedis Architects



Name, Civil Engineer Caroll Engineering, Inc.

DENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT

APP: 02-120573 INC:

SS 🗹 FLS 🗹 ACS 🗹

DATE: 02/02/2023

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Reference Documents

- Solano Community College Fairfield Campus Underground Utilities Plan, dated January 26th, 2020
- Geotechnical Evaluation and Geologic Hazard Assessment, Pool Deck
 Solano Community College Fairfield Campus, dated September 9th, 2022
- Geotechnical Evaluation and Geologic Hazard Assessment, Pool Deck Solano Community College – Fairfield Campus, ADDENDUM LETTER, dated November 15th, 2022



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BID PHASE SCHEDULE

- Mandatory Pre-Bid Conference (web-based meeting via Microsoft Teams): Wednesday, February 15th, 2023, 11:00 am.
 - o Interested Parties need to register through the following link.

REGISTER HERE

- Optional Site Walk: Thursday, February 16th, 2023, 10:00 am 11:00 am.
- Last date to submit questions to Noe.Ramos@Solano.edu: By Wednesday, March 1st, 2023, 2:00 pm.
- Last addendum will be issued: By Wednesday, March 8th, 2023, 2:00 pm.
- Bids Due: By Wednesday, March 15th, 2023, 2:00 pm.
- Mandatory Post Bid Interview: Thursday, March 16th, 2023, Time TBD.
- Solano Community College Board of Trustees Approval: Wednesday, April 5th, 2023.
- Notice of Award: Anticipated by Thursday, April 6th, 2023.
- Notice to Proceed: Anticipated by Thursday, June 1st, 2023.

CONSTRUCTION SCHEDULE

• Overall Project Duration: <u>June 1st, 2023 – October 31st, 2023.</u>



DOCUMENT 00 11 16

NOTICE TO BIDDERS

Notice is hereby given that the governing board ("Board") of the **Solano** Community College District ("District") will receive sealed bids for the following project, Bid No. 23-006 ("Project" or "Contract"):

POOL DECK REPLACEMENT PROJECT

- 2. The Project consists of:
 - a. All labor, materials, equipment, and supplies necessary for the completion of the entire scope of work as outlined in the contract documents. Includes all associated civil, architectural, structural, plumbing, mechanical, electrical and/or low voltage work as indicated in the Drawings and Specifications.
 - b. Project includes the removal and replacement of the existing pool deck, the installation of new outdoor showers, new gates, and ADA upgrades.
 - c. Contractor shall include safe-off of all utilities, including but not limited to all electrical, fire alarm, data, security, and plumbing as needed to complete the project scope.
 - d. The scope of this project is further defined in the Contract Documents. The Contractor will provide all security fencing, safety barriers, portable toilets, and debris bins per the Contract Specifications. Multiple relocations of site fencing/ safety barriers may be required for the completion of this project. All campus pedestrian access shall be maintained, and existing buildings shall remain functional during the duration of the project.
- 3. To bid on this Project, the Bidder is required to possess one or more of the following State of California contractor license(s):

B - General Building Contractor

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

- 4. To bid on this Project, the Bidder is required to be registered as a public works contractor with the Department of Industrial Relations pursuant to the Labor Code.
- 5. Contract Documents will be available on or after February 1st, 2023, and may be viewed and/or downloaded from the District's website at; http://www.solano.edu/measureq/vendor.php
- 6. **Sealed Bids will be received until 2:00 p.m., March 15th, 2023, at Solano Community College**, 4000 Suisun Valley Road, Fairfield, California 94534, at or after which time the bids will be opened and publicly read aloud. Any bid that is submitted after this time shall be non-responsive and returned to the bidder. Any

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claim by a bidder of error in its bid must be made in compliance with section 5100, et seq. of the Public Contract Code.

If mailing, the District suggests delivery one day prior to bid date to allow for sufficient time for receiving, processing and delivery to the appropriate department. It is each bidder's sole responsibility to ensure its bid is delivered timely and received at the location designated as specified. The District will not be responsible for errors in delivery, including not receiving bids via email under any circumstance. Any bid received at the designated location after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

Bidders choosing to mail bids shall send them to;

Attn: Noe Ramos, Kitchell Pool Deck Replacement Project – Bid Number 23-006 4000 Suisun Valley Road, Building 1102 (Kitchell Bond Office) Fairfield, CA 94534

In-person Bid Opening will not be held, and instead will be live streamed over the internet. This will take place at approximately 2:10pm, on the bid due date. Potential bidders can view the live opening on the District's website on the following link:

https://welcome.solano.edu/scc-bids/

- 7. All bids shall be on the form provided by the District. Each bid must conform and be responsive to all pertinent Contract Documents, including, but not limited to, the Instructions to Bidders.
- 8. A bid bond by an admitted surety insurer on the form provided by the District, or a cashier's check or a certified check, drawn to the order of the Solano Community College District, in the amount of ten percent (10%) of the total bid price, shall accompany the Bid Form and Proposal, 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 District for the performance of the services as stipulated in the bid.
- 9. One Virtual Mandatory Pre-Bid Conference (via Microsoft Teams) will be held on Wednesday, February 15th, 2023, at 11:00 a.m. All interested parties must register to attend through the link below.

REGISTER HERE

https://teams.microsoft.com/registration/jhZd3OUUsUSZrreYSqKTBg,bo6xqpYufU2RP3Z1kUx1 nw,sjNQ8bZN20ihkAUb638Khg,eO2sadJFpEitdx2R_YiDng,65XzRTi2Q02JiFOErWIS6A,HI43YmkY 0EO4FcUBDUltHA?mode=read&tenantId=dc5d168e-14e5-44b1-99ae-b7984aa29306

(Copy and paste link above if issues with link)

Failure to attend or tardiness will render the bidder ineligible

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An Independent Site-Visit must also be conducted by potential bidders during the bidding period.

- 10. All pre-bid questions must be submitted in writing to the Project Manager, Noe Ramos, at Noe.Ramos@solano.edu. Pre-Bid questions must be submitted on or before 2:00 p.m., Wednesday, March 1st, 2023.
- 11. 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.
- 12. The successful Bidder may substitute securities for any monies withheld by the District to ensure performance under the Contract, in accordance with the provisions of section 22300 of the Public Contract Code.
- 13. The successful bidder will be expected to meet a twenty percent (20%) Small, Local and Diverse Business Enterprise Program (SLDBE) goal by listing their small, local, and diverse subcontractors and/or suppliers on the SLDBE Bid Form and submitting this with their bid. Contractors who fail to meet the twenty percent (20%) SLDBE goal must submit evidence of having made a Good Faith Effort to attempt to achieve the twenty percent (20%) SLDBE goal.
- 14. The successful bidder will be required to certify that it either meets the Disabled Veteran Business Enterprise ("DVBE") goal of three percent (3%) participation or made a good faith effort to solicit DVBE participation in this Contract if it is awarded the contract for the Work. Note that DVBE participation will count towards SLDBE Program Goal.
- 15. 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 District, pursuant to section 1770, et seq. of the California Labor Code. Prevailing wage rates are also available from the District or on the Internet at: http://www.dir.ca.gov.
- 16. This Project is subject to labor compliance monitoring and enforcement by the Department of Industrial Relations pursuant to Labor Code section 1771.4 and subject to the requirements of Title 8 of the California Code of Regulations. The successful Bidder shall comply with all requirements of Division 2, Part 7, Chapter 1, Articles 1-5 of the Labor Code.
- 17. The Contractor and all Subcontractors under the Contractor shall comply with applicable federal, State, and local requirements relating to COVID-19 or other public health emergency/epidemic/pandemic including, if required, preparing, posting, and implementing a Social Distancing Protocol.
- 18. The District shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on:
 - Α. The base bid amount only.

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19. The Board reserves the right to reject any and all bids and/or waive any irregularity in any bid received. If the District 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.

DOCUMENT 00 21 13

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.

Solano Community College District ("District") will evaluate information submitted by the apparent low Bidder and, if incomplete or unsatisfactory to District, Bidder's bid may be rejected at the sole discretion of District.

1. Bids are requested for a general construction contract, or work described in general, for the following project ("Project" or "Contract"):

POOL DECK REPLACEMENT PROJECT

- 2. Bidder and its subcontractors must possess the appropriate State of California contractors' license and must maintain the license throughout the duration of the project. Bidders must also be registered as a public works contractor with the Department of Industrial Relations pursuant to the Labor Code. Bids submitted by a contractor who is not properly licensed or registered shall be deemed nonresponsive and will not be considered.
- 3. District will receive sealed bids from bidders as stipulated in the Notice to Bidders.
 - a. All bids must be sealed in an envelope, marked with the name and address of the Bidder, name of the Project, the Project Number and/or bid number, and time of bid opening.
 - Bids must be submitted to Solano Community College, 4000 Suisun
 Valley Road, Fairfield California 94534, Building 1102, Kitchell Bond
 Office by date and time shown in the Notice to Bidders.
 - c. Bids must contain all documents as required herein.
- 4. Bidders are advised that on the date that bids are opened, telephones will not be available at the District Offices for use by bidders or their representatives.
- 5. Bids will be opened at or after the time indicated for receipt of bids.

In-person Bid Opening will not be held, and instead shall be live streamed over the internet. Bids will be opened and publicly read aloud via the live stream. This will take place approximately 10 minutes after bids are due. Potential bidders can view the live opening on the District's website on the following link:

https://welcome.solano.edu/scc-bids/

6. Bidders must submit Bids on the documents titled Bid Form and Proposal, and must submit all other required District forms. Bids not submitted on the District's required forms shall be deemed nonresponsive and shall not be considered. Additional sheets required to fully respond to requested information are permissible.

7. Bidders shall not modify the Bid Form and Proposal or qualify their bids. Bidders shall not submit to the District a re-formatted, re-typed, altered, modified, or otherwise recreated version of the Bid Form and Proposal or other District-provided document.

- 8. Bids shall be clearly written and without erasure or deletions. District reserves the right to reject any bid containing erasures, deletions, or illegible contents.
- 9. Bidders must supply all information required by each Bid Document. Bids must be full and complete. District 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 the Bid Form and Proposal:
 - a. Bid Bond on the District's form, or other security. Specification Section 00 43 13.
 - b. Designated Subcontractors List. Specification Section 00 43 36.
 - c. Site Visit Certification. Specification Section 00 45 01.
 - d. Non-Collusion Declaration. Specification Section 00 45 19.
 - e. Iran Contracting Act Certification. Specification Section 00 45 19.01.
 - f. Small, Local and Diverse Business Program (SLDBE). Specification Section 00 45 20.
- 10. Bidders must submit with their Bids cash, a cashier's check or a certified check payable to District, or a bid bond by an admitted surety insurer of not less than ten percent (10%) of amount of Base Bid, plus all additive alternates ("Bid Bond"). If Bidder chooses to provide a Bid Bond as security, Bidder must use the required form of corporate surety provided by District. 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.
- 11. If Bidder to whom the Contract is awarded fails or neglects to enter into the Contract and submit required bonds, insurance certificates, and all other required documents, within **SEVEN (7)** calendar days after the date of the Notice of Award, District may deposit Bid Bond, cash, cashier's check, or certified check for collection, and proceeds thereof may be retained by District as liquidated damages for failure of Bidder to enter into Contract, in the sole discretion of District. It is agreed that calculation of damages District 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.
- 12. 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 Bid. Failure to submit this list when required by law shall result in bid being deemed nonresponsive and the bid will not be considered.

13. All of the listed subcontractors are required to be registered as a public works contractor with the Department of Industrial Relations pursuant to the Labor Code.

- a. An inadvertent error in listing the California contractor license number on the Designated Subcontractors List shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the correct contractor's license number is submitted to the District within 24 hours after the bid opening and the corrected number corresponds with the submitted name and location for that subcontractor.
- b. An inadvertent error listing an unregistered subcontractor shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive provided that any of the following apply:
 - (1) The subcontractor is registered prior to the bid opening.
 - (2) The subcontractor is registered and has paid the penalty registration fee within 24 hours after the bid opening.
 - (3) The subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.
- 14. If a mandatory pre-bid conference and site visit ("Site Visit") is required as referenced in the Notice to Bidders, then Bidders must submit the Site-Visit Certification with their Bid. District will transmit to all prospective Bidders of record such Addenda as District 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 District 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.
- 15. Bidders shall submit the Non-Collusion Declaration with their Bids. Bids submitted without the Non-Collusion Declaration shall be deemed non-responsive and will not be considered.
- 16. Bidders shall submit the Small, Local and Diverse Program (SLDBE) forms with their Bids.
- 17. The Contractor and all Subcontractors under the Contractor shall pay all workers on all work performed pursuant to the 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 District, pursuant to sections 1770 et seq. of the California Labor Code. 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 Department of Industrial Relations, are available upon request at the District's principal office. Prevailing wage rates are also available on the internet at http://www.dir.ca.gov.
- 18. Pursuant to Education Code section 71028 and Public Contract Code section 10115, the District has a participation goal for disabled veteran business enterprises

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("DVBE") of at least three percent (3%) per year of the overall dollar amount expended each year on District projects. In order to meet this requirement by demonstrating a good faith effort, Bidder must advertise for DVBE-certified subcontractors and suppliers before submitting its Bid. The lowest responsive responsible Bidder awarded the Contract must submit certification of compliance with the procedures for implementation of DVBE contracting goals with its signed Agreement. DVBE Certification form is attached. Do not submit this form with your Bid. Note that DVBE participation will count towards SLDBE Program Goal.

- 19. Submission of 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 District that Bidder has fully completed the following:
 - a. Bidder has visited the Site, if required, 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 the District 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(s) thereof by the District, is/are acceptable to Bidder;
 - e. Bidder has made a complete disclosure in writing to the District of all facts bearing upon any possible interest, direct or indirect, that Bidder believes any representative of the District or other officer or employee of the District presently has or will have in this Contract or in the performance thereof or in any portion of the profits thereof;

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f. Bidder must, prior to bidding, perform the work, investigations, research, and analysis required by this document and that Bidder represented in its Bid Form and Proposal and the Agreement that it performed prior to bidding. Contractor under this Contract is 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 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, e.g., on Drawings or in Specifications, has been obtained with reasonable care, and has been recorded in good faith. However, District 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. This information is verifiable by independent investigation and Bidder is required to make such verification as a condition to bidding. In submitting its Bid, Bidder shall rely on the results of its own independent investigation. In submitting its Bid, Bidder shall not rely on District-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. District is not responsible for the completeness of such information for bidding or construction; nor is District responsible in any way for any conclusions or opinions that the Bidder has drawn from such information; nor is the District responsible for subsurface conditions that are not specifically shown (for example, District 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 the document entitled Geotechnical Data, and the document entitled Existing Conditions, 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

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identified in Geotechnical Data and Existing Conditions, and underground facilities data, Bidder may not in any manner rely on the information in these reports and drawings. Subject to the foregoing, Bidder must make its own independent investigation of all conditions affecting the Work and must not rely on information provided by District.

- 20. Bids shall be based on products and systems specified in Contract Documents or listed by name in Addenda. 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." Bidder 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. The District is not responsible and/or liable in any way for a Contractor's damages and/or claims related, in any way, to that Contractor's basing its bid on any requested substitution that the District has not approved in advance and in writing. Contractors 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 section 3400. All requests must comply with the following:
 - a. District must receive any notice of request for substitution of a specified item a minimum of **TEN** (10) calendar days prior to bid opening. The Successful Bidder will not be allowed to substitute specified items unless properly noticed.
 - b. Within 35 days after the date of the Notice of Award, the Successful Bidder shall submit data substantiating the request(s) for all substitution(s) containing sufficient information to assess acceptability of product or system and impact on Project, including, without limitation, the requirements specified in the Special Conditions and the Specifications. Insufficient information shall be grounds for rejection of substitution.
 - c. Approved substitutions, if any, shall be listed in Addenda. District 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 Special Conditions and the Specifications.
- 21. Bidders may examine any available "as-built" drawings of previous work by giving District reasonable advance notice. District will not be responsible for accuracy of "as-built" drawings. The document entitled Existing Conditions applies to all supplied "as-built" drawings.
- 22. All questions about the meaning or intent of the Contract Documents are to be directed via email to the District to Noe Ramos, Noe.Ramos@solano.edu. Interpretations or clarifications considered necessary by the District in response to such questions will be issued in writing by Addenda and emailed to all parties recorded by the District as having received the Contract Documents and posted on the District's website at http://www.solano.edu/measureq/vendor.php. Questions received less than **SEVEN (7)** calendar days prior to the date for opening Bids may

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not be answered. Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

- 23. Addenda may also be issued to modify other parts of the Contract Documents as deemed advisable by the District.
- 24. Each Bidder must acknowledge each Addendum in its Bid Form and Proposal by number or its Bid shall be considered non-responsive. Each Addendum shall be part of the Contract Documents. A complete listing of Addenda may be secured from the District.
- 25. 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 District's option and under terms established in the Contract and pursuant to section 20103.8 of the Public Contract Code, be selected for the Work.
- 26. The District shall award the Contract, if it awards it at all, to the lowest responsive responsible bidder based on the criteria as indicated in the Notice to Bidders. In the event two or more responsible bidders submit identical bids, the District shall select the Bidder to whom to award the Contract by lot.
- 27. Discrepancies between written words and figures, or words and numeral, will be resolved in favor of figures or numerals.
- 28. Bidders in contention for contract awards shall be required to attend a Post Bid interview, which will be set within three (3) calendar days following bid opening. A duly authorized representative of the apparent low bidder is required to attend the Post Bid Interview, in person. The apparent low bidder's authorized representative(s) must have (1) knowledge of how the bid submitted was prepared, (2) the person responsible for supervising performance of the Work, and (3) the authority to bind the apparent low bidder. Failure to attend the Post Bid Interview as scheduled will be considered just cause for the District to reject the Bid as nonresponsive.
- 29. Any bid protest by any Bidder regarding any other bid must be submitted in writing to the District, before 5:00 p.m. of the **THIRD (3rd)** business day following bid opening.
 - a. Only a Bidder who has actually submitted a bid, and who could be awarded
 the Contract if the bid protest is upheld, is eligible to submit a bid protest.
 Subcontractors are not eligible to submit bid protests. A Bidder may not rely
 on the bid protest submitted by another Bidder.
 - b. A bid protest must contain a complete statement of any and all bases for the protest and all supporting documentation. Materials submitted after the bid protest deadline will not be considered.
 - c. The protest must refer to the specific portions of all documents that form the basis for the protest.
 - (1) Without limitation to any other basis for protest, an inadvertent error in listing the California contractor's license number on the Designated

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Subcontractors List shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the correct contractor's license number is submitted to the District within 24 hours after the bid opening and the corrected number corresponds with the submitted name and location for that subcontractor.

- (2) Without limitation to any other basis for protest, an inadvertent error listing an unregistered subcontractor shall not be grounds for filing a bid protest or grounds for considering the bid nonresponsive provided that any of the following apply:
 - (i) The subcontractor is registered prior to the bid opening.
 - (ii) The subcontractor is registered and has paid the penalty registration fee within 24 hours after the bid opening.
 - (iii) The subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.
- d. The protest must include the name, address and telephone number of the person representing the protesting party.
- e. The party filing the protest must concurrently transmit a copy of the protest and any attached documentation to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other bidders or proposers who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
- f. The procedure 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. Failure to comply 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.
- 30. 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 District to reject the bid as nonresponsive.
 - a. Agreement: To be executed by successful Bidder. Submit three (3) copies, each bearing an original signature, or valid electronic signature shall be deemed to be the equivalent of the actual original signature.
 - b. Escrow of Bid Documentation: This must include all required documentation. See the document titled Escrow 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.

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- d. Payment Bond (Contractor's Labor and Material Bond) (100%): 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. Disabled Veteran Business Enterprise Participation Certification.
- i. Drug-Free Workplace Certification.
- j. Tobacco-Free Environment Certification.
- k. Hazardous Materials Certification.
- I. Lead-Based Materials Certification.
- m. Imported Materials Certification.
- n. Sex Offender Registration Act Certification.
- o. Federal Debarment Certification.
- p. Registered Subcontractors List: Must include Department of Industrial Relations (DIR) registration number of each subcontractor for all tiers.
- 31. Time for Completion: District 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.
 - a. In the event that the District 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 District may postpone issuing the Notice to Proceed.
 - b. 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 beyond a 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 District within <u>TEN</u> (10) calendar days after receipt by Contractor of District's notice of postponement.
 - c. It is further understood by the Contractor that in the event that Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay Contractor for the Work that Contractor

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had performed at the time of notification of postponement and which the District 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, District shall have the authority to award the Contract to the next lowest responsive responsible bidder.
- 32. District 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 District believes that it would not be in the best interest of the District 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 District. District also reserves the right to waive any inconsequential deviations or irregularities in any bid. 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.
- 33. It is the policy of the District that no qualified person shall be excluded from participating in, be denied the benefits of, or otherwise be subjected to discrimination in any consideration leading to the award of contract, based on race, color, gender, sexual orientation, political affiliation, age, ancestry, religion, marital status, national origin, medical condition or disability. The Successful Bidder and its subcontractors shall comply with applicable federal and state laws, including, but not limited to the California Fair Employment and Housing Act, beginning with Government Code section 12900, and Labor Code section 1735.
- 34. Prior to the award of Contract, District reserves the right to consider the responsibility of the Bidder. District may conduct investigations as District 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 District's satisfaction within the prescribed time.
- 35. Bidder expressly acknowledges that it is familiar with and capable of complying with applicable federal, State, and local requirements relating to COVID-19 or other public health emergency/epidemic/pandemic including, if required, preparing, posting, and implementing a Social Distancing Protocol, and such costs shall be included in the bid.

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DOCUMENT 00 31 19

EXISTING CONDITIONS

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**

- Documents providing a general description of the Site and conditions of the a. Work may have been collected by Solano Community College District ("District"), its consultants, contractors, and tenants. These documents may, but are not required to, include previous contracts, contract specifications, tenant improvement contracts, as-built drawings, utility drawings, and information regarding underground facilities.
- b. Information regarding existing conditions may be inspected at the District 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. These reports, documents, and other information do **not** excuse Contractor from fulfilling Contractor's obligation to independently investigate any or all existing conditions or from using reasonable prudent measures to avoid damaging existing improvements.
- c. Information regarding existing conditions may also be included in the Project Manual, but shall **not** be considered part of the Contract Documents.
- Prior to commencing this Work, Contractor and the District's representative d. shall survey the Site to document the condition of the Site. Contractor will record the survey in digital videotape format and provide an electronic copy to the District within fourteen (14) days of the survey.
- e. Contractor may also document any pre-existing conditions in writing, provided that both the Contractor and the District's representative agree on said conditions and sign a memorandum documenting the same.
- f. The reports and other data or information regarding existing conditions and underground facilities at or contiguous to the Project are the following:
 - (1)Geotechnical Evaluation and Geologic Hazard Assessment, Pool Deck Solano Community College - Fairfield Campus, dated September 9th,
 - Geotechnical Evaluation and Geologic Hazard Assessment, Pool Deck (2) Solano Community College - Fairfield Campus, ADDENDUM LETTER, dated November 15th, 2022.
 - Solano Community College Fairfield Campus Underground Utilities (3) Plan, dated January 26th, 2020.

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3. Use of Information

- a. Information regarding existing conditions was obtained only for use of District and its consultants, contractors, and tenants for planning and design and is **not** part of the Contract Documents.
- b. District 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 District.
- c. Under no circumstances shall District be deemed to warrant or represent existing above-ground conditions, as-built conditions, or other actual conditions, verifiable by independent investigation. These conditions are verifiable by Bidder by the performance of its own independent investigation that Bidder must perform as a condition to bidding and Bidder should not and shall not rely on this information or any other information supplied by District regarding existing conditions.
- d. 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 District by the District's employees and/or consultants or builders of such underground facilities or others. District does not assume responsibility for the completeness of this information, and Bidder is solely responsible for any interpretation or conclusion drawn from this information.
- e. District shall be responsible only for the general accuracy of information regarding underground facilities, and only for those underground facilities that are owned by District, 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

- a. 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 Contract Documents.
- b. On request, District will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, 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

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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 District's prior approval.



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DOCUMENT 00 31 32

GEOTECHNICAL DATA

1. Summary

This document describes geotechnical data at or near the Project that is in the District's possession available for Contractor's review, and use of data resulting from various investigations. This document is **not** part of the Contract Documents. See General Conditions for definition(s) of terms used herein.

2. Geotechnical Reports

- a. Geotechnical reports may have been prepared for and around the Site and/or in connection with the Work by soil investigation engineers hired by Solano Community College District ("District"), and its consultants, contractors, and tenants.
- b. Geotechnical reports may be inspected at the District 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 are <u>not</u> part of the Contract Documents.
- c. The reports and drawings of physical conditions that may relate to the Project are the following:

Geotechnical Evaluation and Geologic Hazard Assessment, Pool Deck Solano Community College – Fairfield Campus, dated September 9th, 2022

Geotechnical Evaluation and Geologic Hazard Assessment, Pool Deck Solano Community College – Fairfield Campus, ADDENDUM LETTER, dated November 15th, 2022

3. Use of Data

- a. Geotechnical data were obtained only for use of District and its consultants, contractors, and tenants for planning and design and are <u>not</u> a part of Contract Documents.
- b. Except as expressly set forth below, District does not warrant, and makes no representation regarding, the accuracy or thoroughness of any geotechnical data. Bidder represents and agrees that in submitting a Bid it is not relying on any geotechnical data supplied by District, except as specifically allowed below.
- c. Under no circumstances shall District be deemed to make a warranty or representation of existing above ground conditions, as-built conditions, geotechnical conditions, or other actual conditions verifiable by independent investigation. These conditions are verifiable by Bidder by the performance of its own independent investigation that Bidder should perform as a condition to

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bidding and Bidder must not and shall not rely on information supplied by District.

4. Limited Reliance Permitted on Certain Information

a. Reference is made herein for identification of:

Reports of explorations and tests of subsurface conditions at or contiguous to the Site that have been utilized by District in preparation of the Contract Documents.

Drawings of physical conditions in or relating to existing subsurface structures (except underground facilities) that are at or contiguous to the Site and have been utilized by District in preparation of the Contract Documents.

- b. Bidder may rely upon the general accuracy of the "technical data" contained in the reports and drawings identified above, but only insofar as it relates to subsurface conditions, provided Bidder has conducted the independent investigation required pursuant to Instructions to Bidders, and discrepancies are not apparent. The term "technical data" in the referenced reports and drawings shall be limited as follows:
 - (1) The term "technical data" shall include actual reported depths, reported quantities, reported soil types, reported soil conditions, and reported material, equipment or structures that were encountered during subsurface exploration. The term "technical data" does not include, and Bidder may not rely upon, any other data, interpretations, opinions or information shown or indicated in such drawings or reports that otherwise relate to subsurface conditions or described structures.
 - (2) The term "technical data" shall not include the location of underground facilities.
 - (3) Bidder may not rely on the completeness of reports and drawings for the purposes of bidding or construction. Bidder may rely upon the general accuracy of the "technical data" contained in such reports or drawings.
 - (4) Bidder is solely responsible for any interpretation or conclusion drawn from any "technical data" or any other data, interpretations, opinions, or information provided in the identified reports and drawings.

5. Investigations/Site Examinations

a. 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

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- determine its Bid for performing and furnishing the Work in accordance with the time, price, and other terms and conditions of Contract Documents.
- b. On request, District will provide each Bidder access to the Site to conduct such examinations, investigations, explorations, tests, and studies, 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 District's prior approval.



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DOCUMENT 00 41 13 BID FORM AND PROPOSAL

To: Solano Community College Distric	t ("District"	or "Owner")	
From:			
(Proper Name of Bidder)			
The undersigned declares that Bidder has including, without limitation, the Notice to agrees and proposes to furnish all necessand furnish all work in accordance with th Documents, including, without limitation, 006 , for the following project known as:	Bidders and ary labor, made terms and	nd the Instructions to Bidders, ar naterials, and equipment to perfo d conditions of the Contract	nd orm
POOL DECK REPLACEMENT PRO	<u>JECT</u>		
("Project" or "Contract") and will accept in lump sum amount, all taxes included:	າ full paymei	ent for that Work the following to	otal
	_ dollars	\$	
BASE BID			
5% Owner's Allowance of Base Bid	_ dollars	\$	
	_ dollars	\$	
TOTAL BID AMOUNT (CUMULATIVE TOTAL OF BASE BID AN	MOUNT ANI	D 5% OWNER'S ALLOWANCE	")
Bidder acknowledges and agrees that all Allowance(s).	the Total I	Bid Amount accounts for any	and
Additive/Deductive Alternates:			
Alternate #1			
	dollars	\$	
ADDITIVE			
RACING PLATFORMS			

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Alternate #2		
ADDITIVE	dollars	\$
COMPETITIVE STARTING BLOCKS		

Descriptions of alternates are primarily scope definitions and do not necessarily detail the full range of materials and processes needed to complete the construction.

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Additional Detail Regarding Calculation of Base Bid

1. <u>Owner's Allowance</u>. The Bidder's Base Bid shall include a five percent (5%) allowance for the Owner's use. <u>Do not include alternates when calculating the Allowance Amount.</u>

The above allowance(s) shall only be used by authorization by the Owner. Contractor shall not bill for or be due any portion of this allowance(s) unless the District has identified specific work, Contractor has submitted a price for that work or the District has proposed a price for that work, the District has accepted the cost for that work, and the District has prepared an Allowance Expenditure Directive incorporating that work. Contractor hereby authorizes the District to execute a unilateral deductive change order at or near the end of the Project for all or any portion of the allowance not allocated. Any unused portion of the allowance will revert back to the District documented by a deductive change order.

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

- - -

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- 6. It is understood that the District 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. The following documents are attached hereto:
 - Bid Bond on the District's form or other security
 - Designated Subcontractors List
 - Site Visit Certification
 - Non-Collusion Declaration
 - Iran Contracting Act Certification
 - Small, Local, and Diverse Business Program (SLDBE)
- 8. Receipt and acceptance of the following Addenda is hereby acknowledged:

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-General Contractor License**.
- 10. Bidder 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. Bidder specifically acknowledges and understands that if it is awarded the Contract, that it shall perform the Work of the Project while complying with all requirements of the Department of Industrial Relations.
- 12. Bidder hereby certifies that its bid includes sufficient funds to permit Bidder to comply with all local, state or federal labor laws or regulations during the Project, including payment of prevailing wage, and that Bidder will comply with the provisions of Labor Code section 2810(d) if awarded the Contract.
- 13. 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.
- 14. 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.
- 15. Bidder expressly acknowledges that it is familiar with and capable of complying with applicable federal, State, and local requirements relating to COVID-19 or other public

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health emergency/epidemic/pandemic including, if required, preparing, posting, and implementing a Social Distancing Protocol.

- 16. 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, Gov. Code, § 12650 et seq.), the District 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.
- 17. 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 and registered as a public works contractor with the Department of Industrial Relations. Bidder further certifies that it is regularly engaged in the general class and type of work called for in the Contract Documents.

Furthermore, Bidder hereby certifies to the District 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.

Dated this	day of			_ 20
Name of Bidder:				
Type of Organization:				
Signature:				
Print Name:				
Title:				
Address of Bidder:				
Taxpayer 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:	-
Public Works Contractor Rec	nistration No ·			

DOCUMENT 00 43 13

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 Principal ("Principal"),
and,	laws of the State of and a, are held and firmly bound ano County, State of
Doll	ars (\$)
lawful money of the United States of America, for the paymento be made, we, and each of us, bind ourselves, our heirs, excuccessors, and assigns, jointly and severally, firmly by these	ecutors, administrators,

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to the District for all Work specifically described in the accompanying bid for the following project: **Pool Deck Replacement Project** ("Project" or "Contract").

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 District becoming effective, or if the Principal shall fully reimburse and save harmless the District from any damage sustained by the District 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 District 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 District'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.

Pool Deck Replacement Project Project Number: 23-006

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

If the District 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.

·	has been duty executed by the Principal and Surety of, 20
	Principal
	Ву
	Surety
	Ву
	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.

DOCUMENT 00 43 36

<u>DESIGNATED SUBCONTRACTORS LIST</u> (Public Contract Code Sections 4100-4114)

PROJECT: Pool Deck Replacement Project

Bidder acknowledges and agrees that it must clearly set forth below the name, location and California contractor license number of each subcontractor who will perform work or labor or render service to the Bidder in or about the construction of the Work or who will specially fabricate and install a portion of the Work according to detailed drawings contained in the plans and specifications in an amount in excess of one-half of one percent (0.5%) of Bidder's total Base Bid and the kind of Work that each will perform. Vendors or suppliers of materials only do not need to be listed.

Bidder acknowledges and agrees that, if Bidder fails to list as to any portion of Work, or if Bidder lists more than one subcontractor to perform the same portion of Work, Bidder must 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 of the kind of Work that each subcontractor will perform.

If alternate bid(s) is/are called for and Bidder intends to use subcontractors different from or in addition to those subcontractors listed for work under the Base Bid, Bidder must list subcontractors that will perform Work in an amount in excess of one half of one percent (0.5%) of Bidder's total Base Bid, plus alternate(s).

If further space is required for the list of proposed subcontractors, attach additional copies of page 2 showing the required information, as indicated below.

Subcontractor Name:	
	Location:
DIR Registration #:	
Portion of Work:	
Subcontractor Name:	
CA Cont. Lic. #:	Location:
DIR Registration #:	
Portion of Work:	
Subcontractor Name:	
CA Cont. Lic. #:	Location:
DIR Registration #:	
Portion of Work:	

Solano Community College District Pool Deck Replacement Project Project Number: 23-006

Subcontractor Name:		
CA Cont. Lic. #:	Location:	
DIR Registration #:		
Subcontractor Name:		
CA Cont. Lic. #:	Location:	
DIR Registration #:		
Portion of Work:		
Subcontractor Name:		
CA Cont. Lic. #:	Location:	
DIR Registration #:		
Portion of Work:		
Subcontractor Name:		
CA Cont. Lic. #:	Location:	
DIR Registration #:		
Portion of Work:		
Subcontractor Name:		
CA Cont. Lic. #:	Location:	
DIR Registration #:		
Date:		
Proper Name of Bidder:		
Signature:		
Print Name:		
Title:		

DOCUMENT 00 45 01

SITE VISIT CERTIFICATION

TO BE EXECUTED BY BIDDER AND SUBMITTED WITH BID IF SITE VISIT WAS MANDATORY

PROJECT: POOL DECK REPLACEMENT PROJECT

Check option that applies:		
with the conditions relatin	ed the Site of the proposed Work, and became fully acquaing to construction and labor. I fully understand the facilities attending the execution of the Work under contract.	
construction and labor. The	(Bidder's representative) visited the decame fully acquainted with the conditions relating to the Bidder's representative fully understood the facilities, attending the execution of the Work under contract.	ne Site
its Construction Manager, employees, and consultan	te Solano Community College District, its Architect, its Enginits Program Manager, and all of their respective officers, ages to from any damage, or omissions, related to conditions the gray wisit and/or the Bidder's representative's visit to the second	gents, at could
I certify under penalty of pis true and correct.	perjury under the laws of the State of California that the fo	regoing
Date:		
Proper Name of Bidder:		
Signature:		
Print Name:		
Title:		



DOCUMENT 00 45 19

NON-COLLUSION DECLARATION (Public Contract Code Section 7106)

I am the	_ of	, the party making the foregoing bid. [Name of Firm]
[litle]	L	Name of Firm]
company, association, org sham. The bidder has not a false or sham bid. The b or agreed with any bidder The bidder has not in any communication, or confere bidder, or to fix any overh other bidder. All statement indirectly, submitted his of or divulged information or association, organization,	ganization, directly or bidder has not anyone manner, dence with a nead, profit or her bid por data relations in deposi	or corporation. The bid is genuine and not collusive or indirectly induced or solicited any other bidder to put in not directly or indirectly colluded, conspired, connived, else to put in a sham bid, or to refrain from bidding. lirectly or indirectly, sought by agreement, anyone to fix the bid price of the bidder or any other c, or cost element of the bid price, or of that of any ed in the bid are true. The bidder has not, directly or rice or any breakdown thereof, or the contents thereof, ive thereto, to any corporation, partnership, company, tory, or to any member or agent thereof, to effectuate a aid, and will not pay, any person or entity for such
partnership, joint venture,	, limited lia esents that	n on behalf of a bidder that is a corporation, ability company, limited liability partnership, or any he or she has full power to execute, and does execute, der.
		nder the laws of the State of California that the at this declaration is executed on,
		[Date]
at	/ [Stat	 e]
Date:		
Proper Name of Bidder:		
Signature:		
Print Name:		
Title:		

END OF DOCUMENT

The undersigned declares:



DOCUMENT 00 45 19.01

IRAN CONTRACTING ACT CERTIFICATION (Public Contract Code Sections 2202-2208)

PROJECT/CONTRACT NO.: Pool Deck Replacer Community College District ("District") and	ment Project/23-006 between the Solano
("Contractor" or "Bidder") ("Cont	ract" or "Project").
Prior to bidding on or submitting a proposal for \$1,000,000 or more, the bidder/proposer must Contract Code section 2204.	
The bidder/proposer must complete ONLY ONE OPTION 1, check the corresponding box and corresponding box, complete OPTION 2, check the corresponding box, complete documentation demonstrating the exemption approximation	mplete the certification below. To complete ete the certification below, and attach
financial institution extending twenty mil to another person, for 45 days or more,	the California Department of General tract Code section 2203(b), and we are not a lion dollars (\$20,000,000) or more in credit if that other person will use the credit to sector in Iran and is identified on the current
OPTION 2. Bidder/Proposer has received certification requirement pursuant to Public A copy of the written documentation den included with our bid/proposal.	olic Contract Code sections 2203(c) and (d).
CERTIFICATION:	
I, the official named below, CERTIFY UNDER PEI authorized to legally bind the bidder/proposer to certification is made under the laws of the State	o the OPTION selected above. This
Vendor Name/Financial Institution (Printed)	Federal ID Number (or n/a)
By (Authorized Signature)	•
Printed Name and Title of Person Signing	Date Executed



DOCUMENT 00 45 20

SMALL, LOCAL AND DIVERSE BUSINESS ENTERPRISES PROGRAM (SLDBE)

1. Solano Community College District has established a Small, Local, and Diverse Business Enterprises Program (SLDBE Program) to ensure access, equity and inclusion of Solano County businesses in the area of construction contracting associated with Measure Q Bond expenditures. This Small, Local and Diverse Business Program reflects the District's commitment to its core value of *Equity*. The SLDBE program is innovative and inclusionary; defining and promoting *Diversity* in contracting and procurement by extending Measure Q Bond Program opportunities to Solano County small businesses, minority-owned business, women-owned business and those owned by disabled veterans.

2. Program Goals

- a. The SLDBE participation goal is 20% of the total construction contract amount. SLDBE requirements may be achieved through the combined participation of the following:
 - Local DBE Businesses (minimum 10%)
 - Local non-DBE Businesses
 - Non-local DBE Businesses
- b. DBE businesses include:
 - Certified Small Business Enterprises (SBEs)
 - Certified Minority-owned Business Enterprises (MBEs)
 - Certified Women-owned Business Enterprises (WBEs)
 - Certified Disadvantaged Business Enterprises (DBEs)
 - Certified Disabled Veteran-owned Business Enterprises (DVBEs)
- c. Prior to award, Contractor is required to submit certification documents for all SLDBE businesses included in their bids. As the District is not a certifying agency, it will accept the certifications listed below.
 - State of California Department of General Services (SBE, Microbusiness, DVBE)
 - Federal Department of Transportation/California Department of Transportation DBE, MBE, WBE
 - California Unified Certification Program (CUPC)—All Member Agencies DBE
 - California Public Utilities Commission (CPUC) MBE, WBE
 - Western Region National Minority Supplier Development Council (MBE)
 - Women Business Enterprise National Council (WBENC)

3. SLDBE Bid Form

The general contractor is required to meet the 20% SLDBE goal by listing its small, local, and diverse subcontractors and/or suppliers on the SLDBE Bid Form (SLDBE Information Bid Form) and **submitting this with its bid**. The participation of a

Pool Deck Replacement Project Project Number: 23-006

general contractor that meets the criteria for SLDBE shall be counted toward the 20% goal. DVBE participation required to be documented separately shall also be included on the SLDBE form and shall be counted towards the 20% goal. The District will count one hundred percent (100%) of the materials, supplies and services purchased from SLDBEs towards reaching the combined 20% goal.

4. Good Faith Effort

Contractors who fail to meet the 20% SLDBE goal must submit evidence of having made a Good Faith Effort to attempt to achieve the 20% SLDBE goal:

- a. These contractors must submit the Good Faith Effort Checklist (GFE Checklist) with the bid:
- b. The apparent low bidder must submit Good Faith Effort Documentation within two business days after bid opening.
- c. The District or its designee will review these efforts and make a determination of whether the contractor made a Good Faith Effort to attain the goals. Failure to make a Good Faith Effort or to comply with these requirements will render the bid or solicitation submitted non-responsive.

5. Tracking and Reporting

The project construction manager will monitor the general contractor's progress in achieving the 20% SLDBE goal throughout the contract and coordinate with the Bond Program Manager for overall program compliance. The general contractor will be required to submit quarterly SLDBE contractor/subcontractor reporting sheets that track and display contract values with these firms. The quarter reporting periods are as follows: January - March, April - June, July - September, and October - December. Contractor will submit SLDBE Status Reports within eight (8) calendar days of the end of each quarter.

6. Participation

All contractors working on the District's Bond program will be expected to participate in good faith with the Small, Local, and Diverse Business Enterprise program.

No SLDBE listed on the general contractor's bid form may be substituted or removed from the contract or have its contract modified without prior written College approval. In the event of a SLDBE substitution, the general contractor must make a good faith effort to replace the substituted subcontractor with another SLDBE and must submit evidence of this effort to the District.

During the term of a contract any willful failure to comply with the participation goals agreed upon shall be deemed a material breach of contract.

7. Definitions

The following is a list of definitions for terms used throughout this SLDBE Program. The terms are arranged in alphabetical order.

- a. "Bid" shall mean and include an offer by a bidder or contractor to perform or provide labor, materials, or equipment to the District for a price.
- b. "Bidder" shall mean a person or firm who submits a bid.

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- c. "Contract" shall mean and include any agreement between the College and a person or company to provide labor, services, materials and/or equipment for construction work.
- d. "Contractor" (See definition of prime contractor).
- e. "College" shall mean the Solano Community College District.
- f. "District" shall mean the Solano Community College District.
- g. "Diverse" shall mean a firm whose ownership has been certified by one of the certifying agencies recognized by the District **as either**: 1) at least 51% minority (MBE or DBE), 2) at least 51% female (WBE or DBE), 3) at least 51% disabled veteran or veteran (DVBE).
- h. "Goals" shall mean the relevant share of Small Local and Diverse Business Enterprise participation.
- i. "Joint venture" shall mean an association of two or more businesses to carry out a single business enterprise for profit, for which purpose they combine their property, capital, efforts, skills and knowledge. Each party to the joint venture must hold a current, active license in good standing and must share in risks and gains to the extent of the party's participation in the joint venture. To be counted for the purposes of this program, the individual firms of the joint ventures must be certified by an agency on the District's recognized list of certifying agencies.
- j. "Local" shall mean a business enterprise with a business location in Solano County and the City of Winters.
- k. "Small" shall mean a business enterprise which together with any affiliates has 100 or fewer employees and has averaged annual gross receipts of fourteen million dollars (\$14M) or less over the previous three years. Such firms include any that are certified by the State of California General Services Agency.
- I. "Participation" shall mean using one or more SLDBE firms to satisfy the District's subcontracting goals in the execution of the contract.
- m. "Prime Contractor" shall mean any person(s), firm, partnership, corporation, or joint venture that submits a bid to perform construction related work, and/or enters into a contract with the District.
- n. "Project" shall mean a contract or series of contracts required to complete construction related work that meets prescribed occupancy and use criteria.
- o. "Subcontractor" shall mean any individual, partnership, corporation or other legal entity entering into a contract with the prime contractor to perform a portion of the work or supply materials, services and equipment required to complete the project.
- p. "Supplier" is a firm that owns, operates or maintains a warehouse, production facility or store in which the materials, supplies or equipment described in the Specifications and required under the contract are both kept in stock and regularly sold to the public in the usual course of business.

Pool Deck Replacement Project Project Number: 23-006

SLDBE INFORMATION BID FORM - PAGE 1

ROJECT NO.:	23-006 E	BID OPENING DATE	:	ВІ	DDE	R: _				
		K REPLACEMENT P								
			RM:							
AME:		EMAIL:			PHO	NE I	MUM	BER	:	
	Г	T		1					1	
NAME OF SLDBE	CERTIFIED BY	CERTIFICATION FILE NO.	DESCRIPTION OF WORK OR SUPPLY	LOCAL	MBE	DVBE	DBE	WBE	Small	DOLLAR VALUE OF CONTRACT
OCAL DBE BID Minimum 10%)	AMOUNT \$	= ACHIE	VED %							
OCAL NON-DBE	E BIDAMOUNT S	= ACHIE	VED %							

%

= ACHIEVED

NON-LOCAL DBE BID AMOUNT \$

SMALL LOCAL DIVERSE BUSINESS BIDDER INFORMATION - PAGE 2

PROVIDE THE NAME, ADDRESS, & TELEPHONE NO. FOR EACH SLDBE FIRM LISTED ON THE PAGE 1 OF THIS FORM.

NAME OF SLDBE	ADDRESS	LICENSE #	PHONE	EMAIL

SOLANO COMMUNITY COLLEGE DISTRICT SMALL, LOCAL AND DIVERSE BUSINESS PROGRAM

POOL DECK REPLACEMENT PROJECT BID 23-006

GOOD FAITH EFFORT (GFE) CHECKLIST SHEET (2 pages)

To be completed by all Bidders who do not achieve SLDBE participation goals

10 00	completed by all bidders who do not achieve obbbe participation goals
Name	of Bidder (please print legibly)
<u>PLEAS</u>	SE INITIAL TO INDICATE EACH ACTION TAKEN
	Bidder attended pre-solicitation or pre-bid meeting scheduled by Solano Community College District
	Bidder identified and selected specific items of project for which the contract will be awarded to be performed by SLDBE.
	Bidder advertised, not less than 10 calendar days before the bid opening date in one or more daily or weekly newspapers, trade association publications, minority or trade oriented publications, trade journals, or other media, as specified by Solano Community College, for SLDBEs interested in participating in the project.
	Name of publication in which advertisement was placed
	Date advertisement appeared
	Bidder provided written notice of his/her interest in bidding on the contract to SLDBEs at least 10 calendar days prior to the opening of bids.
	Bidder followed up initial solicitations of interest by contacting SLDBEs to determine, with certainty whether enterprises were interested in performing specific items of the project.
	Bidder provided interested SLDBEs with information about the plans, specifications, and requirements for the selected subcontracting of material supply work.
	Bidder requested assistance from community organizations; SLDBE contractor groups; veterans groups; local, state or federal disadvantaged business assistance officers; and/or other organizations that provide assistance in the recruitment and placement of SLDBEs as they are available.
	Bidder negotiated in good faith with SLDBEs and did not unjustifiably reject as unsatisfactory bids prepared by any SLDBEs.

Pool Deck Replacement Project Project Number: 23-006

Bidder certifies that all actions marked on the checklist were performed by the Bidder prior to the bid opening date. Failure to complete the above checklist may result in finding the proposal to be non-responsive, subject to the Solano Community College's determination. This checklist is provided as a courtesy to the bidder and is not intended to be a waiver of or modification to any of the Specifications included in the Contract Specifications or in other Contract documents, including but not limited to the SLDBE Program. Each bidder must comply with all Specifications and Contract documents. The undersigned states that the representations made herein are made under penalty of perjury.

Name of Authorized Firm Representative (Please Print)	Title
Signature of Authorized Firm Representative	Date

Pool Deck Replacement Project Project Number: 23-006

		Non- Local contract %								
		Non-Local Local DBE Contract Contracts %								
		Local Non-								
		Local DBE Local Contract Non-DBE % Contracts								
		Local L DBE (
		Contract (Value								
		Contract								
		Services Provided Contract Contract Contract or Performed Date Value %								
		38S								
		MBE								Ш
		WBE			_					Ш
		DABE	_							
		DBE		\dashv	\dashv	_	_			Н
		Local			_					Ш
		qns			_					Ш
		Prime			_		_			Н
1	I	DIR#								
	10UNT DERS 10UNT	DBE Certification No.								
	ORIGINAL CONTRACT AMOUNT APPROVED CHANGE ORDERS CURRENT CONTRACT AMOUNT	City/State								
	ORIGINAL CC APPROVED C	Contractor License #								
PROJECT: DATE:		Firm Name								TOTALS

Enter info for each contracted subcontractor.
 Enter '1' in each applicable column to indicate whether a contractor/ subcontractor is Local or certified as DBE/DVBE/MBE/WBE/SBE.
 A 'Local' business is one which has a business address in Solano County or City of Winters.

SLDB PROGRAM CONTRACT PARTICIPATION TRACKING - QUARTERLY

Solano Community College District Pool Deck Replacement Project Project Number: 23-006



Solano Community College District Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 45 26

WORKERS' COMPENSATION CERTIFICATION

PROJECT/CONTRACT NO.: Pool De Community College District ("Di ("Contractor" or "Bidder") ("Contra	
Labor Code section 3700, in releva	
Every employer except the more of the following ways:	State shall secure the payment of compensation in one or
	ainst liability to pay compensation by one or more ized to write compensation insurance in this state; and/or
self-insure, which m Director of Industria	e Director of Industrial Relations a certificate of consent to ay be given upon furnishing proof satisfactory to the I Relations of ability to self-insure and to pay any may become due to his employees.
employer to be insured against liab insurance in accordance with the p	ction 3700 of the Labor Code which require every bility for workers' compensation or to undertake self-performance of the Work of this Contract.
Date:	
Proper Name of Contractor:	
Signature:	
Print Name:	
Title:	
	ctions 1860 and 1861, the above certificate must be body prior to performing any Work under this Contract.)



Pool Deck Replacement Project
Project Number: 23-006

DOCUMENT 00 45 46. 01

PREVAILING WAGE AND RELATED LABOR REQUIREMENTS CERTIFICATION

	ool Deck Replacement Project/23-006 between the Solano et ("District") and
("Contractor"	or "Bidder") ("Contract" or "Project").
requirements regarding preva payroll records, and apprentic	nform to the State of California Public Works Contract ailing wages, benefits, on-site audits with 48-hours' notice, ce and trainee employment requirements, for all Work on the out limitation, labor compliance monitoring and enforcement by Relations.
Date:	
Proper Name of Contractor:	
Signature:	
Print Name:	
Title:	



DOCUMENT 00 45 46.02

DISABLED VETERAN BUSINESS ENTERPRISE PARTICIPATION CERTIFICATION

PROJECT/CONTRACT NO.: Pool Deck Replacement Project/23-006 between the Solano
Community College District ("District") and
("Contractor" or "Bidder") ("Contract" or "Project").

GENERAL INSTRUCTIONS

Pursuant to Education Code section 71028 and Public Contract Code section 10115, the District has a participation goal for disabled veteran business enterprises ("DVBE") of at least three percent (3%) per year of the overall dollar amount expended each year by District on projects that receive state funding. Therefore, the lowest responsive responsible bidder awarded the Contract must submit this document to the District with its executed Agreement, identifying the steps contractor took to solicit DVBE participation in conjunction with this Contract. **Do not submit this form with your bids.**

PART I – Method of Compliance with DVBE Participation Goals. Check the appropriate box to indicate your method of committing the contract dollar amount.

YOUR BUSINESS ENTERPRISE IS:	AND YOU WILL	AND YOU WILL
A. □ Disabled veteran owned and your forces will perform at least 3% of this Contract	Include a copy of your DVBE letter from Office of Small Business and Disabled Veterans Business Enterprise Services ("OSDS")*	Complete Part 1 of this form and the Certification
B. □ Disabled veteran owned but is unable to perform 3% of this Contract with your forces	Use DVBE subcontractors /suppliers to bring the Contract participation to at least 3%	Include a copy of each DVBE's letter from OSDS (including yours, if applicable), and complete Part 1 of this
C. □ NOT disabled veteran owned	Use DVBE subcontractors /suppliers for at least 3% of this Contract	form and the Certification
D. □ Unable to meet the required participation goals after good faith efforts	Make good faith efforts, including contacts, advertisement and DVBE solicitation	Complete all of this form and the Certification

^{*} A DVBE letter from OSDS is obtained from the participating DVBE.

You must complete the following table to show the dollar amount of DVBE participation:

	TOTAL CONTRACT PRICE
A. Prime Bidder, if DVBE (own participation)	\$
B. DVBE Subcontractor or Supplier	
1.	
2.	
3.	
4.	
C. Subtotal (A & B)	
D. Non-DVBE	
E. Total Bid	

PART II – Contacts. To identify DVBE subcontractors/suppliers for participation in your contract, you must contact each of the following categories. You should contact several DVBE organizations.

CATEGORY	TELEPHONE NUMBER	DATE CONTACTED	PERSON CONTACTED
1. The District, if any			*
2. OSDS, provides assistance locating DVBEs at https://caleprocure.ca.gov/pages/Publi cSearch/supplier-search.aspx	(916) 375- 4940		*
3. DVBE Organization (List)			*

^{*}Write "recorded message" in this column, if applicable.

Pool Deck Replacement Project Project Number: 23-006

PART III – **Advertisement.** You must advertise for DVBE participation in both a trade and focus paper. List the advertisement you place to solicit DVBE participation. Advertisements should be published at least fourteen (14) days prior to bid/proposal opening; if you cannot advertise fourteen (14) days prior, advertisements should be published as soon as possible. Advertisements must include that your firm is seeking DVBE participation, the project name and location, and you firm's name, your contact person, and telephone number. Attach copies of advertisements to this form.

FOCUS/TRADE PAPER NAME	CHECK ONE		DATE OF ADVERTISEMENT
	TRADE	FOCUS	

PART IV – DVBE Solicitations. List DVBE subcontractors/suppliers that were invited to bid. Use the following instructions to complete the remainder of this section (read the three columns as a sentence from left to right). If you need additional space to list DVBE solicitations, please use a separate page and attach to this form.

IF THE DVBE	THEN			AND		
was selected to participate	Check "YES" in the "SELECTED" column			include a copy of their DVBE letter(s) from OSDS		
was NOT selected to participate	Check "NO" in the "SELECTED" column			state why in the "REASON NOT SELECTED" column		
did not respond to your solicitation	Check the "NO column.	RESPO	NSE"			
DVBE CONTACTED	SELECTED		REASON NOT SELECTED	NO RESPONSE		
		YES	NO			

A copy of this form must be retained by you and may be subject to a future audit.

Solano Community College District Pool Deck Replacement Project Project Number: 23-006

CERTIFICATION

facts with regard to the repre	, certify that I am the bidder's and that I have made a diligent effort to ascerta sentations made herein. In making this certification, I q. of the Government Code providing for the imposition lse claims.	in the am
Date:		
Proper Name of Contractor:		
Signature:		
Print Name:		
Title:		

DOCUMENT 00 45 46.03

DRUG-FREE WORKPLACE CERTIFICATION

PROJECT/CONTRACT NO.: Pool Deck Replacement Project/23-006 between the Sola	no
Community College District ("District") and	
("Contractor" or "Bidder") ("Contract" or "Project").	

This Drug-Free Workplace Certification form is required from the successful Bidder pursuant to Government Code section 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any state agency must certify that it will provide a drug-free workplace by doing certain specified acts. In addition, the Act provides that each contract or grant awarded by a state agency may be subject to suspension of payments or termination of the contract or grant, and the contractor or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

The District is not a "state agency" as defined in the applicable section(s) of the Government Code, but the District is a local agency and community college district under California law and requires all contractors on District projects to comply with the provisions and requirements of the Drug-Free Workplace Act of 1990.

Contractor must also comply with the provisions of Health & Safety Code section 11362.3 which prohibits the consumption or possession of cannabis or cannabis products in any public place, including on campus.

Contractor shall certify that it will provide a drug-free workplace by doing all of the following:

- a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace and specifying actions which will be taken against employees for violations of the prohibition.
- b. Establishing a drug-free awareness program to inform employees about all of the following:
 - (1) The dangers of drug abuse in the workplace.
 - (2) The person's or organization's policy of maintaining a drug-free workplace.
 - (3) The availability of drug counseling, rehabilitation, and employee-assistance programs.
 - (4) The penalties that may be imposed upon employees for drug abuse violations.
- c. Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required above, and that, as a

Pool Deck Replacement Project Project Number: 23-006

condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code section 8355 listed above and will publish a statement notifying employees concerning (a) the prohibition of controlled substance at the workplace, (b) establishing a drug-free awareness program, and (c) requiring that each employee engaged in the performance of the Contract be given a copy of the statement required by section 8355(a), and requiring that the employee agree to abide by the terms of that statement.

I also understand that if the District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of section 8355, that the Contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of the aforementioned Act.

I acknowledge that I am aware of the provisions of and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990 and Health and Safety Code section 11362.3.

Date:	
Proper Name of Contractor:	
Signature:	
Print Name:	
Title:	

DOCUMENT 00 45 46.04

TOBACCO-FREE ENVIRONMENT CERTIFICATION

END OF DOCUMENT

SOLANO COMMUNITY COLLEGE DISTRICT



DOCUMENT 00 45 46.05

HAZARDOUS MATERIALS CERTIFICATION

	CT/CONTRACT NO.: Po nunity College Distric	ol Deck Replacement Project/23-006 between the Solano t ("District") and
		or "Bidder") ("Contract" or "Project").
1.	polychlorinated biphen Environmental Protecti material, or any other laws, rules, or regulati or incorporated in any	ifies that no asbestos, or asbestos-containing materials, yl (PCB), or any material listed by the federal or state on Agency or federal or state health agencies as a hazardous material defined as being hazardous under federal or state ons, ("New Hazardous Material"), shall be furnished, installed, way into the Project or in any tools, devices, clothing, or ect any portion of Contractor's work on the Project for District.
2.		ifies that it has instructed its employees with respect to the dards, hazards, risks, and liabilities.
3.	but not limited to chry actinolite. Any or all n	tos-containing material shall be defined as all items containing sotile, crocidolite, amosite, anthophyllite, tremolite, and naterial containing greater than one-tenth of one percent be defined as asbestos-containing material.
4.	Material shall be settle testing procedure, at t	the question of whether or not material is New Hazardous d by electron microscopy or other appropriate and recognized he District's determination. The costs of any such tests shall if the material is found to be New Hazardous Material.
5.	installed with equipme	ound to be "New Hazardous Material" or Work or material nt containing "New Hazardous Material" will be immediately will be removed at Contractor's expense at no additional cost
6.	Procedures & Requirent Contractor certifies the applicable to the Work	nd understood the document titled Hazardous Materials nents, and shall comply with all the provisions outlined therein. It it is knowledgeable of, and shall comply with, all laws including, but not limited to, all federal, state, and local laws, les, regulations, and ordinances applicable to the Work.
Date:		
Proper	Name of Contractor:	
Signat	ure:	
Print N	lame:	
Title:		



Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 45 46.06

LEAD-BASED MATERIALS CERTIFICATION

PROJECT/CONTRACT NO.: Pool Deck Replacement Proje	ct/23-006 between the Solano
Community College District ("District") and	
("Contractor" or "Bidder") ("Contract" or "Pro	oject").

This certification provides notice to the Contractor that:

- (1) Contractor's work may disturb lead-containing building materials.
- (2) Contractor shall notify the District if any work may result in the disturbance of lead-containing building materials.
- (3) Contractor shall comply with the Renovation, Repair and Painting Rule, if lead-based paint is disturbed in a six-square-foot or greater area indoors or a 20-square-foot or greater area outdoors.

1. Lead as a Health Hazard

Lead poisoning is recognized as a serious environmental health hazard facing children today. Even at low levels of exposure, much lower than previously believed, lead can impair the development of a child's central nervous system, causing learning disabilities, and leading to serious behavioral problems. Lead enters the environment as tiny lead particles and lead dust disburses when paint chips, chalks, peels, wears away over time, or is otherwise disturbed. Ingestion of lead dust is the most common pathway of childhood poisoning; lead dust gets on a child's hands and toys and then into a child's mouth through common hand-to-mouth activity. Exposures may result from construction or remodeling activities that disturb lead paint, from ordinary wear and tear of windows and doors, or from friction on other surfaces.

Ordinary construction and renovation or repainting activities carried out without lead-safe work practices can disturb lead-based paint and create significant hazards. Improper removal practices, such as dry scraping, sanding, or water blasting painted surfaces, are likely to generate high volumes of lead dust.

Because the Contractor and its employees will be providing services for the District, and because the Contractor's work may disturb lead-containing building materials, CONTRACTOR IS HEREBY NOTIFIED of the potential presence of lead-containing materials located within certain buildings utilized by the District. All school buildings built prior to 1978 are presumed to contain some lead-based paint until sampling proves otherwise.

2. Overview of Law

Both the Federal Occupational Safety and Health Administration ("Fed/OSHA") and the California Division of Occupational Safety and Health ("Cal/OSHA") have implemented safety orders applicable to all construction work where a contractor's employee may be occupationally exposed to lead.

Pool Deck Replacement Project Project Number: 23-006

The OSHA Regulations apply to all construction work where a contractor's employee may be occupationally exposed to lead. The OSHA Regulations contain specific and detailed requirements imposed on contractors subject to those regulations. The OSHA Regulations define construction work as work for construction, alteration, and/or repair, including painting and decorating. Regulated construction work includes, but is not limited to, the following:

- a. Demolition or salvage of structures where lead or materials containing lead are present;
- b. Removal or encapsulation of materials containing lead;
- c. New construction, alteration, repair, or renovation of structures, substrates, or portions thereof, that contain lead, or materials containing lead;
- d. Installation of products containing lead;
- e. Lead contamination/emergency cleanup;
- f. Transportation, disposal, storage, or containment of lead or materials containing lead on the site or location at which construction activities are performed; and
- g. Maintenance operations associated with the construction activities described in the subsection.

Because it is assumed by the District that all painted surfaces (interior as well as exterior) within the District contain some level of lead, it is imperative that the Contractor, its workers and subcontractors fully and adequately comply with all applicable laws, rules and regulations governing lead-based materials (including title 8, California Code of Regulations, section 1532.1).

Contractor shall notify the District if any Work may result in the disturbance of lead-containing building materials. Any and all Work that may result in the disturbance of lead-containing building materials shall be coordinated through the District. A signed copy of this Certification shall be on file prior to beginning Work on the Project, along with all current insurance certificates.

3. Renovation, Repair and Painting Rule, Section 402(c)(3) of the Toxic Substances Control Act

The EPA requires lead safe work practices to reduce exposure to lead hazards created by renovation, repair and painting activities that disturb lead-based paint. Pursuant to the Renovation, Repair and Painting Rule (RRP), renovations in homes, childcare facilities, and schools built prior to 1978 must be conducted by certified renovations firms, using renovators with training by a EPA-accredited training provider, and fully and adequately complying with all applicable laws, rules and regulations governing lead-based materials, including those rules and regulations appearing within title 40 of the Code of Federal Regulations as part 745 (40 CFR 745).

Pool Deck Replacement Project Project Number: 23-006

The RRP requirements apply to all contractors who disturb lead-based paint in a six-square-foot or greater area indoors or a 20-square-foot or greater area outdoors. If a DPH-certified inspector or risk assessor determines that a home constructed before 1978 is lead-free, the federal certification is not required for anyone working on that particular building.

4. **Contractor's Liability**

If the Contractor fails to comply with any applicable laws, rules, or regulations, and that failure results in a site or worker contamination, the Contractor will be held solely responsible for all costs involved in any required corrective actions, and shall defend, indemnify, and hold harmless the District, pursuant to the indemnification provisions of the Contract, for all damages and other claims arising therefrom.

If lead disturbance is anticipated in the Work, only persons with appropriate accreditation, registrations, licenses, and training shall conduct this Work.

It shall be the responsibility of the Contractor to properly dispose of any and all waste products, including, but not limited to, paint chips, any collected residue, or any other visual material that may occur from the prepping of any painted surface. It will be the responsibility of the Contractor to provide the proper disposal of any hazardous waste by a certified hazardous waste hauler. This company shall be registered with the Department of Transportation (DOT) and shall be able to issue a current manifest number upon transporting any hazardous material from any school site within the District.

The Contractor shall provide the District with any sample results prior to beginning Work, during the Work, and after the completion of the Work. The District may request to examine, prior to the commencement of the Work, the lead training records of each employee of the Contractor.

THE CONTRACTOR HEREBY ACKNOWLEDGES, UNDER PENALTY OF PERJURY, THAT IT:

- 1. HAS RECEIVED NOTIFICATION OF POTENTIAL LEAD-BASED MATERIALS ON THE OWNER'S PROPERTY;
- 2. <u>IS KNOWLEDGEABLE REGARDING AND WILL COMPLY WITH ALL APPLICABLE LAWS,</u> RULES, AND REGULATIONS GOVERNING WORK WITH, AND DISPOSAL, OF LEAD.

THE UNDERSIGNED WARRANTS THAT HE/SHE HAS THE AUTHORITY TO SIGN ON BEHALF OF AND BIND THE CONTRACTOR. THE DISTRICT MAY REQUIRE PROOF OF SUCH AUTHORITY.

Date:	
Proper Name of Contractor:	
Signature:	
Print Name:	
Title:	



Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 45 46.07

IMPORTED MATERIALS CERTIFICATION

	RACT NO.: Pool Deck Replace ollege District ("District") and	_	
	ollege District ("District") and ("Contractor" or "Bidder") ("Con	tract" or "Project"	').
any soils, aggre the District at le any environmen of the California Code ("CEQA"), including requir	be executed by all entities that, egate, or related materials ("Fill'east ten (10) days before delivental review of the Project performa Environmental Quality Act, section and all requirements of section rements for a Phase I environmental Quality Colleges Chancellor's Off	") to the Project S ery. All Fill shall sa med pursuant to t ction 21000, et se n 17210, et seq., c ental assessment a	ite and shall be provided to atisfy all requirements of the statutes and guidelines q., of the Public Resources of the Education Code, acceptable to the State of
Certification of:	□ Delivery Firm/Transporter□ Wholesaler□ Distributor	□ Broker	□ Manufacturer□ Retailer
Type of Entity	□ Corporation□ Limited Partnership□ Sole Proprietorship	□ General Partn□ Limited Liabili□ Other	
Name of firm ('Firm"):		
Mailing address	::		
Addresses of br	ranch office used for this Project	::	
If subsidiary, n	ame and address of parent com	pany:	
Safety Code and I further certify delivered, and/o Project Site are	e below, I hereby certify that I am I the sections referenced therein on behalf of the Firm that all soils or supplied or that will be provided free of any and all hazardous made. I further certify that I am auth	regarding the defin s, aggregates, or re d, delivered, and/o terial as defined in	ition of hazardous material. Plated materials provided, r supplied by this Firm to the section 25260 of the Health
Date:			
Proper Name of	f Firm:		
Signature:			
Print Name:			
Title:			



DOCUMENT 00 45 46.08

SEX OFFENDER REGISTRATION ACT CERTIFICATION

	/CONTRACT NO.: Poonity College District	ol Deck Replacement Project/23-006 between the Solano ("District") and
	("Contractor" o	r "Bidder") ("Contract" or "Project").
This certi	fication provides noti	ce to the Contractor that:
•	to sections 290 to 2 carrying on a vocati days, or for an aggreshall, in addition to Act, register with the commencing employequired by the Depvocation" include en	290.001 requires every person required to register pursuant 290.009, inclusive, of the Sex Offender Registration Act who is ion at the community college for more than fourteen (14) regate period exceeding thirty (30) days in a calendar year, the registration required by the Sex Offender Registration he campus police department within five (5) working days of yment at that community college on a form as may be partment of Justice. The terms "employed or carries on a amployment whether or not financially compensated, formed for government or educational benefit.
•	instead register with sheriff of the county unincorporated area	ollege has no campus police department, the registrant shall he the police of the city in which the campus is located or the y in which the campus is located in an a or in a city that has no police department, on a form as may Department of Justice.
•		also notify the campus police department within five (5) asing to be employed, or ceasing to carry on a vocation, at the
of section of its empthey are	n 290.001 of the Pena ployees, subcontracto designated as employ (5) working days bef	les, under penalty of perjury, that it is aware of the provisions all Code, and it will provide notice of the above provisions to all ors, and employees of subcontractors regardless of whether yees or acting as independent contractors of the Contractor at fore commencing the performance of the Work of this
		THAT HE/SHE HAS THE AUTHORITY TO SIGN ON BEHALF OF THE DISTRICT MAY REQUIRE PROOF OF SUCH AUTHORITY.
Date:	_	
Proper Na	ame of Contractor: _	
Signature	e: _	
Print Nam	ne: _	

END OF DOCUMENT

SOLANO COMMUNITY COLLEGE DISTRICT

Title:

SEX OFFENDER REGISTRATION ACT **CERTIFICATION DOCUMENT 00 45 46.08-1**



DOCUMENT 00 45 46.11

FEDERAL DEBARMENT CERTIFICATION

PROJECT/CONTRACT NO.: Pool Deck Replacement Project/23-006 between the Soland Community College District ("District") and
("Contractor" or "Bidder") ("Contract" or "Project").
1. Bidder certifies to the best of its knowledge and belief, that it and its principals:
a. Are not presently debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded by any Federal department or Board;
b. Have not within a three-year period preceding this bid been convicted of or had civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrus statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and
d. Have not within a three-year period preceding this application/proposal had one o more public transactions (Federal, State or local) terminated for cause or default.
2. Where Bidder is unable to certify to any of the statements in this certification, Bidder sha attach an explanation to this certification.
3. Bidder agrees to include the following certification in all subcontracts, for all lower tiers:
"Debarment and Suspension Certification – By submission of its proposal, the contractor (or vendor, or consultant, depending on the transaction) certifies to the best of its knowledge and belief that it and its principals are not presently debarred suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency in accordance with 2 CFI 200.213 and 2 CFR 180."
Date:
Proper Name of Contractor:
Signature:
Print Name:
Title:



Pool Deck Replacement Project

Project Number: 23-006

DOCUMENT 00 45 49

REGISTERED SUBCONTRACTORS LIST (Labor Code Section 1771.1)

PROJECT: POOL DECK REPLACEMENT PROJECT

Date Submitted (for Updates):
Contractor acknowledges and agrees that it must clearly set forth below the name and Department of Industrial Relations (DIR) registration number of each subcontractor for all tiers who will perform work or labor or render service to Contractor or its subcontractors in or about the construction of the Work at least two (2) weeks before the subcontractor is scheduled to perform work. This document is to be updated as all tiers of subcontractors are identified.
Contractor acknowledges and agrees that, if Contractor fails to list as to any subcontractor of any tier who performs any portion of Work, the Contract is subject to cancellation and the Contractor will be subjected to penalty under applicable law.
If further space is required for the list of proposed subcontractors, attach additional copies of page 2 showing the required information, as indicated below.
Subcontractor Name:
DIR Registration #:
Portion of Work:
Subcontractor Name:
DIR Registration #:
Portion of Work:
Subcontractor Name:
DIR Registration #:
Portion of Work:
Subcontractor Name:
DIR Registration #:
Portion of Work:

Subcontractor Name:	
DIR Registration #:	
Portion of Work:	
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Subcontractor Name:	
DIR Registration #:	
Portion of Work:	
Subcontractor Name:	
DIR Registration #:	
Portion of Work:	
Subcontractor Name:	
DIR Registration #:	
Portion of Work:	
Subcontractor Name:	
DIR Registration #:	
Portion of Work:	
Date:	
Name of Contractor:	
Signature:	
Print Name:	
Title:	

Project Number: 23-006

DOCUMENT 00 45 90

POST BID INTERVIEW

PART 1 - GENERAL

1.01 SUMMARY

If requested by the District, this Section requires the apparent low bidder to attend and participate in a Post Bid Interview with the Construction Manager, prior to award of any contract by the District. The Post Bid Interview will be scheduled by the Construction Manager within three (3) calendar days after the date of bid.

1.02 REQUIRED ATTENDANCE

- A. A duly authorized representative of the apparent low bidder is required to attend the Post Bid Interview, in person.
- B. The apparent low bidder's authorized representative(s) must have (1) knowledge of how the bid submitted was prepared, (2) the person responsible for supervising performance of the Work, and (3) the authority to bind the apparent low bidder.
- C. Failure to attend the Post Bid Interview as scheduled will be considered just cause for the District to reject the Bid as nonresponsive.

1.03 POST BID INTERVIEW PROCEDURE

- A. The Construction Manager will review the Bid with the attendees.
- B. The Construction Manager will review the Contract Documents with the attendees, including but not limited to:
 - (1) Insurance
 - (2) Bonding
 - (3) Addenda
 - (4) Pre-Bid Clarifications
 - (5) Scope of Work
 - (6) Bid Packages Descriptions
 - (7) Bid Alternates
 - (8) Contract Plans
 - (9) Contract Specifications
 - (10) Project Schedule and Schedule Requirements

Pool Deck Replacement Project Project Number: 23-006

- (11) Critical Dates Requirement for Other Bid Packages
- (12) Prevailing Wage Requirements
- (13) Liquidated Damages
- (14) Required Documentation for Contract Administration
- (15) Contract Coordination Requirements

1.04 POST BID INTERVIEW DOCUMENTATION

The Construction Manager will document the Post Bid Interview on the form attached to this Section. Both the apparent low bidder and the Construction Manager are required to sign the Post Bid Interview Documentation.

Pool Deck Replacement Project Project Number: 23-006

POST BID INTERVIEW

CONSTRUCTION MANAGER

KITCHELL CEM 4000 Suisun Valley Road, Building 1102 Fairfield, California 94534

BIDDE	R:								
DATE:				TIME:		PHONE	Ε:		
I.	INT	ROD	UCTIONS:						
	A.	Pre	sent						
				CONTRAC	TOR		CONT	RACTOR	
						•			
						•	Kitch	ell CEM	
II.	PRO	OPOS	SED CONTRA	CT: Pool De	eck Replace	ement	Project		
III.			E OF INTER\ /ING:	/IEW IS TO ASSUF	RE A MUTUA	L UNDE	ERSTANDING	OF THE	
	A.	Do	you acknowl	edge submission o	of a complet	e and a	ccurate bid?	Yes	No
	В.			edge the Bid Docu nd can you meet th			nelines after	Yes	No
	C.		you acknowloud uments?	edge the requirem	ents for the	escrov	v of bid	Yes	No
	D.	Are	you comfort	able with your list	ed subcontr	actors?		Yes	No
IV.	COI	NTRA	CTUAL REQU	JIREMENTS:					
	A.	Do	you understa	and you are a prim	ne contracto	r?		Yes	No
	В.	Can	you meet s	pecified insurance	requiremen	ts?		Yes	No
		1.		our policies that rents exceed the mir				Yes	No
		2.		uesting that the D ility Insurance Poli				Yes	No

		3.	Will there be a gap between the per occurrence amount of any underlying policy and the start of the coverage under the Umbrella or Excess Liability Insurance Policy?	Yes	No
	C.		you provide the Performance Bond and Labor and Material d for 100% of the Contract Price as stipulated?	Yes	No
		1.	Cost for bond:%	Yes	No
		2.	Is the cost of your bond in your base bid?	Yes	No
		3.	Is your surety licensed to issue bonds in California?	Yes	No
	D.	Do '	you understand the sex offender registration requirements?	Yes	No
	E.	Is it	understood that all workers must be paid prevailing wage?	Yes	No
	F.	regi	understood that all subcontractors of every tier must be stered as a publics works contractor with the Department of ustrial Relations	Yes	No
V.	SCC	PE (OF WORK:		
	A.	Ack	nowledged Receipt of Addenda #1	Yes	No
	В.		the costs for addenda items included in your bid? (if licable)	Yes	No
	C.		you have a complete understanding of your Scope of Work er the proposed Agreement?	Yes	No
	D.		have re-reviewed the documents and understand the Scope of Work. Are there any items that require clarification?	Yes	No
		If y	es, please identify them.		
		1.			
		_			
		2.			
	3.				

Is (are) there additional cost(s) for the above item(s)?

Yes No

	E.	Hav	ve you reviewed bid alternative(s) #1? (If applicable)	Yes	No
	F.	Are	the costs for bid alternatives included in your bid?	Yes	No
	G.		the plans and specifications clear and understandable to your isfaction?	Yes	No
	Н.	Do sub	Yes	No	
VI.	SCI	HEDI	JLE:		
	A.		you acknowledge and agree to the stipulated completion dates milestones in the contract?	Yes	No
		1.	Will you provide a detailed construction schedule to within the required ten (10) days of the Notice to Proceed, per the contract?	Yes	No
		2.	Can you meet the submittal deadline?	Yes	No
		3.	It is understood that the Project schedule is critical and that that weekend and overtime work may be required to meet the milestones.	Yes	No
		4.	It is understood that if rain does occur, then all dewatering and protection of work is required, per the contract. If not, what do you believe must change and why?	Yes	No
	В.	dep the	ntify critical materials, deliveries, long lead items and other pendencies, including Owner Furnished items that could affect completion of your work.	Yes	No
		1.			
		2.			
		3. 4.			
		5.			

	C.	Do you understand that there is going to be maintenance and other construction taking place on site during the course of the project?	Yes	No
VII.	EXI	ECUTION OF WORK		
	A.	Do you understand the access to the site?	Yes	No
	В.	Do you understand the staging area restrictions?	Yes	No
	C.	Have you included protection of [asphalt, floors, and roofs]?	Yes	No
	D.	Do you understand that the site is occupied by students, teachers, administrators, parents, etc.?	Yes	No
VIII.	СО	NTRACTOR COMMENTS/SUGGESTIONS:		
	1.			
	2.			
	3.	-		
	4.			
	5.			

Pool Deck Replacement Project Project Number: 23-006

IX. CONTRACTOR

You agree the information contained herein is part of your contractual obligations. Your signature acknowledges your agreement to perform all Work in the Contract Documents, and that costs for all Work are included in your bid.

The foregoing information is true and accurate, and I am authorized to sign as an officer of the company I am representing.

[Company Name]	
Signature	Title:
Date:	<u> </u>
X. CONSTRUCTION MANAGER	
KITCHELL CEM	
Signature	Title:
Date:	<u> </u>
Title of Decuments DOCT DID INTERVIEW	
Title of Document: <u>POST BID INTERVIEW</u> Number of Pages:	
Date of Document:	



Project Number: 23-006

DOCUMENT 00 51 00

NOTICE OF AWARD

Dated	:20		
To:	(Contractor)		
	(Address)		
From:	Governing Board ("Board") of the Solano Comn	munity College District ("Di	strict")
Re:	Pool Deck Replacement Project, Project No	o. 23-006 ("Project").	
	actor has been awarded the Contract for the abo _, 20, by action of the District's Board.	ove referenced Project on _	
	ontract Price ises alternates		
	nust comply with the following conditions precede date of this Notice of Award.	ent within SEVEN (7) cale	ndar days
The Ca	anticopher shall accounts and subject the Sallactions	d	- £ + l

The Contractor 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.

- a. Agreement: To be executed by successful Bidder. Submit three (3) copies, each bearing an original signature, or valid electronic signature shall be deemed to be the equivalent of the actual original signature.
- b. Escrow of Bid Documentation: This must include all required documentation. See document titled Escrow 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 (Contractor's Labor & Material Bond) (100%): 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. Disabled Veteran Business Enterprise Participation Certification.
- i. Drug-Free Workplace Certification.

Pool Deck Replacement Project Project Number: 23-006

- j. Tobacco-Free Environment Certification.
- k. Hazardous Materials Certification.
- I. Lead-Based Materials Certification.
- m. Imported Materials Certification.
- n. Sex Offender Registration Act Certification.
- o. Federal Debarment Certification.
- p. Registered Subcontractors List: Must include Department of Industrial Relations (DIR) registration number of each subcontractor for all tiers.

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

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

SOLANO COMMUNITY COLLEGE DISTRICT

BY:			
NAME:			
TITLE:			

Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 52 13

AGREEMENT

THIS AGREEME	NT IS MADE AND ENTERED INTO THIS	DAY OF	
, 20	, by and between the Solano Communit	y College District ("Distric	ct") 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 the following project:

POOL DECK REPLACEMENT PROJECT

("Project" or "Contract" or "Work")

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 and submission of all documents required to secure funding or by the Division of the State Architect for close-out of the Project, under the direction and supervision of, and subject to the approval of, the District 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 District 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 District for interpretation. If a conflict exists in the Contract Documents, valid, written modifications, beginning with the most recent, shall control over this Agreement (if any), which shall control over the Special Conditions, which shall control over any Supplemental Conditions, which shall control over the General Conditions, which shall control over the remaining Division 0 documents, which shall control over Division 1 Documents which shall control over Division 2 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 the case of a 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 District with the functionally complete and operable Project described in the Drawings and Specifications. In no case shall a document calling for lower quality and/or quantity material or workmanship control. The decision of the District in the matter shall be final.

Pool Deck Replacement Project Project Number: 23-006

4. **Time for Completion**: It is hereby understood and agreed that the Work under this Contract shall be completed by **October 31st**, **2023**, per the milestone dates specified in Specification Section 00 01 20 "List of Schedules" ("Contract Time").

- 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 District for all loss and damage that the District may suffer on account thereof. The Contractor shall coordinate its Work with the Work of all other contractors. The District 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**: Time is of the essence for all work under this Agreement. It is hereby understood and agreed that it is and will be difficult and/or impossible to ascertain and determine the actual damage that the District will sustain in the event of and by reason of Contractor's delay; therefore, Contractor agrees that it shall pay to the District the sum of Two-Thousand Dollars and 00/100 (\$2,000.00) per day as liquidated damages for each and every day's delay beyond the time herein prescribed in completion of the Work.

It is hereby understood and agreed that this amount is not a penalty.

In the event that any portion of the liquidated damages is not paid to the District, the District may deduct that amount from any money due or that may become due the Contractor under this Agreement, and such deduction does not constitute a withholding or penalty. The District'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 the District may grant, provided that Contractor has complied with the claims procedure of the Contract Documents. This provision does not exclude the recovery of damages by either party under other provisions in the Contract Documents.

- 7. Loss Or Damage: The District and its agents and 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 whatsoever; and shall hold the District and its agents and authorized representatives harmless from all liability of every kind and nature arising from accident, negligence, or any cause whatsoever.
- 8. Limitation Of District Liability: District's financial obligations under this Contract shall be limited to the payment of the compensation provided in this Contract. Notwithstanding any other provision of this Contract, in no event shall District be liable, regardless of whether any claim is based on contract or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost

Pool Deck Replacement Project Project Number: 23-006

profits or revenue, lost bonding capacity, arising out of or in connection with this Contract for the services performed in connection with this Contract.

- **9. Insurance and Bonds**: Prior to issuance of the Notice to Proceed by the District, Contractor shall provide all required certificates of insurance, insurance endorsements, 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, the District, 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, Project Inspector, and DSA: Contractor hereby acknowledges that the Architect(s), the Project Inspector(s), and the Division of the State Architect ("DSA") have authority to approve and/or suspend Work if the Contractor's Work does not comply with the requirements of the Contract Documents, Title 24 of the California Code of Regulations, and all applicable laws and regulations. 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 prior written approval of the District, 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 _____ Contractor's license(s) issued by the State of California, Contractors' State License 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. Registration as Public Works Contractor**: The Contractor and all Subcontractors currently are registered as public works contractors with the Department of Industrial Relations, State of California, in accordance with Labor Code section 1771.1.
- **15. Payment of Prevailing Wages**: The Contractor and all 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 District, pursuant to sections 1770 et seq. of the California Labor Code.
- **16. Labor Compliance Monitoring and Enforcement**: This Project is subject to labor compliance monitoring and enforcement by the Department of Industrial Relations pursuant to Labor Code section 1771.4 and Title 8 of the California Code of Regulations. Contractor specifically acknowledges and understands that it shall perform the Work of this Agreement while complying with all the applicable provisions of Division 2, Part 7, Chapter 1, of the Labor Code, including, without

Pool Deck Replacement Project Project Number: 23-006

limitation, the requirement that the Contractor and all of its Subcontractors shall timely submit complete and accurate electronic certified payroll records as required by the Contract Documents, or the District may not issue payment.

17. 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, the District 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: AND xx/100 (\$____ in lawful money of the United States, which sum is to be paid according to the schedule provided by the Contractor and accepted by the District and subject to additions and deductions as provided in the Contract. This amount supersedes any previously stated and/or agreed to amount(s). 18. Owner's Allowance: Included in the Contract Price above is a five percent (5% Percent) allowance for the Owner's use only, for the following price: DOLLARS AND xx/100 (\$____ The above allowance shall only be used by authorization by the Owner. Contractor shall not bill for or be due any portion of this allowance unless the District has identified specific work, Contractor has submitted price for that work or the District has proposed a price for that work, the District has accepted the cost for that work, and the District has prepared a change order incorporating that work. Contractor hereby authorizes the District to execute a unilateral deductive Change Order at or near the end of the Project for all or any portion of the Allowance no allocated. 19. **ALTERNATE #01:** Included in the Contract Price above is Alternate #01, for Racing Platforms, for the following price:

21. No Representations: No representations have been made other than as set forth in writing in the Contract Documents, including this Agreement. Each of the Parties to this Agreement warrants that it has carefully read and understood the terms and conditions of this Agreement and all Contract Documents, and that it has not relied upon the representations or advice of any other Party or any attorney not its own.

ALTERNATE #02: Included in the Contract Price above is Alternate #02, for

Competitive Starting Blocks, for the following price:

_____ DOLLARS AND xx/100 (\$_____)

_____ DOLLARS AND xx/100 (\$_____)

20.

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- **22. Entire Agreement**: The Contract Documents, including this Agreement, set forth the entire agreement between the parties hereto and fully supersede any and all prior agreements, understandings, written or oral, between the parties hereto pertaining to the subject matter thereof.
- **23. 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.
- **24. Authority of Signatories**: Each party has the full power and authority to enter into and perform this Contract, and the person signing this Contract on behalf of each party has been properly authorized and empowered to enter into this Contract. This Contract may be executed in one or more counterparts, each of which shall be deemed an original. For this Agreement, and for all Contract Documents requiring a signature, a facsimile or electronic signature shall be deemed to be the equivalent of the actual original signature. All counterparts so executed shall constitute one Contract binding all the Parties hereto.

[SIGNATURES ON FOLLOWING PAGE]

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

CONTRACTOR	SOLANO COMMUNITY COLLEGE DISTRICT
By:	Ву:
Title:	Title:
OTE: 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.	

END OF DOCUMENT

SOLANO COMMUNITY COLLEGE DISTRICT

DOCUMENT 00 55 00

NOTICE TO PROCEED

Dated:	, 20
TO:	("Contractor")
	:
PROJECT:	POOL DECK REPLACEMENT PROJECT
	CONTRACT NO.: Pool Deck Replacement Project/23-006 between the Solano ity College District and Contractor ("Contract").
obligation	otified that the Contract Time under the above Contract will commence to run on, 20 By that date, you are to start performing your s under the Contract Documents. In accordance with the Agreement executed by r, the date of completion is October 31 st , 2023.
	submit the following documents by 5:00 p.m. of the TENTH (10th) calendar day 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.	Registered Subcontractors List: A complete subcontractors list for all tiers, including the name, address, telephone number, email address, facsimile number, California State Contractors License number, license classification, Department of Industrial Relations registration number, and monetary value of all Subcontracts.
Thank you	J. We look forward to a very successful Project.
	SOLANO COMMUNITY COLLEGE DISTRICT
	BY:
	NAME:
	TITLE:



DOCUMENT 00 56 00

ESCROW BID DOCUMENTATION

1. Requirement to Escrow Bid Documentation

- a. Contractor shall submit, within <u>SEVEN (7)</u> 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 District 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, District 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 District may award the Contract to the next lowest responsive responsible bidder.
- e. NO PAYMENTS WILL BE MADE, NOR WILL DISTRICT 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 the District.

2. Ownership of Escrow Bid Documentation

- a. The Escrow Bid Documentation is, and shall always remain, the property of Contractor, subject to review by District, 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, District agrees to safeguard the Escrow Bid Documentation, and all

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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 language (e.g., English) of the specification.
- Escrow Bid Documentation must clearly itemize the estimated costs of b. 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. All labor rates must be broken down to specify any and all burden costs including, but not limited to, health and welfare pay, vacation and holiday pay, pension contributions, training rates, benefits of any kind, insurance of any kind, workers' compensation, liability insurance, truck expenses, supply expenses of any kind, payroll taxes, and any other taxes of any kind. 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 District 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 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 District 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

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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, District 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. The storage facilities shall be the appropriate size for all the Escrow Bid Documentation and located conveniently to both District's and Contractor's offices.
- b. The Escrow Bid Documentation shall be examined by both District and Contractor, at any time deemed necessary by either District 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) District 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 District and Contractor. If Contractor fails to designate a representative or appear for joint examination on SEVEN (7) calendar days' notice, then the District 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 District,

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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 District 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.

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DOCUMENT 00 57 00

ESCROW AGREEMENT IN LIEU OF RETENTION (Public Contact Code Section 22300)

(Note: Contractor must use this form.)

this _ the So Road,	This Escrow Agreement in Lieu of Retention ("Escrow Agreement") is made and entered into this day of, 20, by and between the Solano Community College District ("District"), whose address is 4000 Suisun Valley Road, Fairfield, California 94534, and, and, and, and, and, and, and, and, and				
state	or fed	("Escrow Agent"), a derally chartered bank in the state of California, whose address is			
		·			
For th		sideration hereinafter set forth, District, Contractor, and Escrow Agent agree as			
1.		suant to section 22300 of Public Contract Code of the State of California, which is eby incorporated by reference, Contractor has the following two (2) options:			
		Deposit securities with Escrow Agent as a substitute for retention earnings required to be withheld by District pursuant to the Construction Contract No entered into between District and Contractor for the			
		Project, in the amount of			
		Dollars (\$) dated,, 20, (the "Contract"); or			
		On written request of Contractor, District shall make payments of the retention earnings for the above referenced Contract directly to Escrow Agent.			
	opti dep time leas	en Contractor deposits the securities as a substitute for Contract earnings (first on), Escrow Agent shall notify District within ten (10) calendar days of the osit. The market value of the securities at the time of substitution and at all es from substitution until the termination of the Escrow Agreement shall be at equal to the cash amount then required to be withheld as retention under the ns of the Contract between District and Contractor.			
		urities shall be held in name of Solano Community College School District, and Il designate Contractor as beneficial owner.			
2.	wou	rict shall make progress payments to Contractor for those funds which otherwise ald be withheld from progress payments pursuant to Contract provisions, provided Escrow Agent holds securities in form and amount specified above.			

When District 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

3.

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Agreement and the rights and responsibilities of the Parties shall be equally applicable and binding when District 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 District. The District will charge Contractor \$______ for each of District's deposits to the escrow account. These expenses and payment terms shall be determined by District, 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 District.
- 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 District to Escrow Agent that District consents to withdrawal of amount sought to be withdrawn by Contractor.
- 7. District shall have the right to draw upon the securities and/or withdraw amounts from the Escrow Account in the event of default by Contractor. Upon seven (7) days' written notice to Escrow Agent from District of the default, if applicable, Escrow Agent shall immediately convert the securities to cash and shall distribute the cash as instructed by District. Escrow Agent shall not be authorized to determine the validity of any notice of default given by District pursuant to this paragraph, and shall promptly comply with District's instructions to pay over said escrowed assets. Escrow Agent further agrees to not interplead the escrowed assets in response to a conflicting demand.
- 8. Upon receipt of written notification from District 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 District and Contractor pursuant to Paragraphs 5 through 8, inclusive, of this Escrow Agreement and District and Contractor shall hold Escrow Agent harmless from Escrow Agent's release and disbursement of securities and interest as set forth above.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

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notice on behalf of District and on behalf of Contractor in connection with the foregoing, and exemplars of their respective signatures are as follows: On behalf of District: On behalf of Contractor: Title Title Name Name Signature Signature Address Address On behalf of Escrow Agent: Title Name Signature Address At the time that the Escrow Account is opened, District and Contractor shall deliver to Escrow Agent a fully executed copy 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 District: On behalf of Contractor: Title Title Name Name Signature Signature

Names of persons who are authorized to give written notice or to receive written

10.

Address

END OF DOCUMENT

Address



Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 61 13.13

PERFORMANCE BOND (100% of Contract Price)

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

MAION ALL DEDCOME BY THESE DESCRIPTS.

KNOW ALL PERSONS BY THESE PRESENTS:
WHEREAS, the governing board ("Board") of the Solano Community College District ("District") 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: Pool
Deck Replacement Project ("Project" or "Contract") which Contract dated
, 20, 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, 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 the District 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:

- Promptly perform all the work required to complete the Project; and
- Pay to the District all damages the District incurs as a result of the Principal's failure to perform all the Work required to complete the Project.

Or, at the District's sole discretion and election, the Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by the District of the lowest responsible bidder, arrange for a contract between such bidder and the District and make available as Work progresses sufficient funds to pay the cost of completion less the "balance of the Contract Price," and to pay and perform all obligations of Principals under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages. The term "balance of the Contract Price," as used in this paragraph, shall mean the total amount payable to Principal by the District under the Contract and any modifications thereto, less the amount previously paid by the District to the Principal, less any withholdings by the District allowed under the Contract. District shall not be required or obligated to accept a tender of a completion contractor from the Surety for any or no reason.

The condition of the obligation is such that, if the above bound Principal, 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 its part to be kept and performed at the time and in the intent and meaning, including all contractual guarantees and warrantees of materials and workmanship, and shall indemnify and save harmless the

Pool Deck Replacement Project Project Number: 23-006

District, 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.

Surety expressly agrees that the District may reject any contractor or subcontractor proposed by Surety to fulfill its obligations in the event of default by the Principal. Surety shall not utilize Principal in completing the Work nor shall Surety accept a Bid from Principal for completion of the Work if the District declares the Principal to be in default and notifies Surety of the District's objection to Principal's further participation in the completion of the Work.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the District from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the District's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

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. The Surety also stipulates and agrees that it shall not be exonerated or released from the obligation of this bond by any overpayment or underpayment by the District that is based upon estimates approved by the Architect. The Surety 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 name	ed, on the, 20
Principal	Surety
Ву	Ву
	Name of California Agent of Surety
	Address of California Agent of Surety

Contractor 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

Telephone No. of California Agent of Surety

Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 61 13.16

PAYMENT BOND Contractor's Labor & Material Bond (100% Of Contract Price)

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

KNOW ALL PERSONS BY THESE PRESENTS:
WHEREAS, the governing board ("Board") of the Solano Community College District , ("District") 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:
Pool Deck Replacement Project ("Project" or "Contract") which Contract dated, 20, 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 one hundred percent (100%) of the Contract price, to secure the claims to which reference is made in sections 9000 through 9510 and 9550 through 9566 of the Civil Code, and division 2, part 7, of the Labor Code.
NOW, THEREFORE, 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 its subcontractors, or the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, 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 required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal or any of its subcontractors of any tier under Section 13020 of the Unemployment Insurance Code with respect to such work or labor, that the Surety will pay the same in an amount not exceeding

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 section 9100 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

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.

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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

·	riginal thereof, have been duly executed by the the day of, 20
Principal	Surety
Ву	Ву
	Name of California Agent of Surety
	Address of California Agent of Surety
	Telephone No. of California Agent of Surety

Contractor 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.

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DOCUMENT 00 63 40

ALLOWANCE EXPENDITURE DIRECTIVE FORM

Solano Community College District 4000 Suisun Valley Road Fairfield, CA 94534

ΑI	LLO	WA	NC	Ξ
ΕX	PEN	IDI	ΓUF	RE
DIR	ECT	ΊV	E N	0.:

	Date: DSA File No.: DSA Appl. No.:		
The following parties agree to the terms of this Allo	wance Expenditure Directive ("AED"):		
Owner Name, Address, Telephone:	Contractor Name, Address, Telephone:		

Reference	Description	Allowance Authorized for Expenditure
Request for AED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	\$
Request for AED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	\$
Request for AED # Requested by: Performed by: Reason:	[Description of unforeseen item relating to Work] [Requester] [Performer] [Reason]	\$

Total Contract Allowance Amount:	\$
Amount of Previously Approved Allowance Expenditure Directive(s):	\$
Amount of this Allowance Expenditure Directive:	\$

Pool Deck Replacement Project Project Number: 23-006

The undersigned Contractor approves the foregoing release of allowance for completion of each specified item, and agrees to furnish all labor, materials and services and perform all work necessary to complete any additional work specified for the consideration stated therein ("Work"). 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 section 12650, et seq.

This Allowance Expenditure Directive must be signed by an authorized District representative.

It is expressly understood that the authorized allowance expenditure granted herein represent a full accord and satisfaction for any and all cost impacts of the items herein, and Contractor waives any and all further compensation based on the items herein. The value of the extra work or changes expressly includes any and all of the Contractor's costs and expenses, and its subcontractors, both direct and indirect. Any costs, expenses, or damages not included are deemed waived.

Signatures:

DISTRICT:	PROJECT / CONSTRUCTION MANAGER:
SOLANO COMMUNITY COLLEGE DISTRICT	KITCHELL CEM
Date:	Date:
By: [Print Name and Title here]	By: [Print Name and Title here]
CONTRACTOR:	ARCHITECT:
Date:	Date:
By: [Print Name and Title here]	By: [Print Name and Title here]
PROJECT INSPECTOR:	
Date:	
By: [Print Name and Title here]	

Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 63 47

DAILY FORCE ACCOUNT REPORT

From: Contractor [Name/Address]

To: Solano Community College District 4000 Suisun Valley Road Fairfield, CA

Pr	oject: POOL DECK REPLA	CEMENT PROJECT					
Co Ac	ntractor hereby submits this count Directive No,	on			ork perforr	med, pursuant t	to Force
		[D	ate of Wo	rk]			
	ntractor attests that the ma	terial, labor, and eq	juipment i	itemiz	ed herein	were used <u>only</u>	on the force
Α.	Material: Attach all applic complete the information l		ovided in	prior l	Daily Force	e Account Repo	rts and
	Descri	ption		Unit	t Price	Quantity	Cost
		Daily sub	ototal (w/o	out ma	 		
В.	<u>Labor:</u> Labor must be fully information below.		-				he
	Name	Craft	Regu Hrs		Rate	OT Hrs.	Rate
		Daily subt	total (w/o	ut ma	rkup): \$_		

Pool Deck Replacement Project Project Number: 23-006

C. Equipment: Attach all applicable invoices not provided in prior Daily Force Account Reports and complete the information below.

Type / Model	Hrs. Operated	Rate

Daily	/ subtotal	(w/out marku	p)	: \$	5

Complete based on information reported above.

	WORK PERFORMED OTHER THAN BY CONTRACTOR	ADD
i.	<u>Material</u>	
ii.	Add Labor	
iii.	Add Equipment	
iv.	<u>Subtotal</u>	
٧.	Add overhead and profit for any and all tiers of Subcontractor , the total not to exceed ten percent (10%) of Item (d)	
vi.	<u>Subtotal</u>	
vii.	Add Overhead and Profit for Contractor, not to exceed five percent (5%) of Item (f)	
viii.	<u>Subtotal</u>	
ix.	Add Bond and Insurance, not to exceed two percent (2%) of Item (h)	
x.	TOTAL	

	WORK PERFORMED BY CONTRACTOR	<u>ADD</u>
(a)	<u>Material</u>	
xi.	Add Labor	
xii.	Add Equipment	
xiii.	Subtotal	
xiv.	Add Overhead and Profit for Contractor, not to exceed fifteen percent (15%) of Item (d)	
XV.	Subtotal	
xvi.	Add Bond and Insurance, not to exceed two percent (2%) of Item (f)	
xvii.	TOTAL	

Pool Deck Replacement Project Project Number: 23-006

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 (Gov. Code, § 12650, et seq.).

It is expressly understood that all force account work for the date stated above must be reported herein, and Contractor may not claim any labor, equipment, material or any other costs or expenses not reported herein. Contractor is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, or damages, not included are deemed waived.

SUBMITTED BY:		REVIEWED BY:		
Contractor:		Solano Community College District:		
[Name]	Date	[Name]	Date	
District may require additional in Upon District's return of the Dail- therein. District's review and retu account work does not constitute	y Force Account I urn of the Daily F	Report, Contractor may invoid orce Account Report and/or p	ce the Work reflected payment for the force	



Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 00 63 57

PROPOSED CHANGE ORDER FORM

Solano Community College District 4000 Suisun Valley Road Fairfield, CA 94534

PCO NO.:	

Date:

Project: Pool Deck Replacement Project

Bid No.: 23-006 DSA File No.: RFI #: DSA Appl. No.:

Contractor hereby submits for District's review and evaluation this Proposed Change Order ("PCO"), submitted in accordance with and subject to the terms of the Contract Documents, including Sections 17.7 and 17.8 of the General Conditions. Any spaces left blank below are deemed no change to cost or time.

Contractor understands and acknowledges that documentation supporting Contractor's PCO must be attached and included for District review and evaluation. Contractor further understands and acknowledges that failure to include documentation sufficient to, in District's discretion, support some or all of the PCO, shall result in a rejected PCO.

	WORK PERFORMED OTHER THAN BY CONTRACTOR	ADD	DEDUCT
(a)	Material (attach suppliers' invoice or itemized quantity		
(1.)	and unit cost plus sales tax)		
(b)	Add Labor (attach itemized hours and rates, fully		
	Burdened, and specify the hourly rate for each additional		
	labor burden, for example, payroll taxes, fringe benefits,		
	etc.)		
(c)	Add Equipment (attach suppliers' invoice)		
(d)	<u>Subtotal</u>		
(e)	Add overhead and profit for any and all tiers of		
, ,	Subcontractor , the total not to exceed ten percent		
	(10%) of Item (d)		
(f)	Subtotal		
(g)	Add General Conditions (if Time is Compensable)		
(3)	(attach supporting documentation)		
(h)	<u>Subtotal</u>		
(i)	Add Overhead and Profit for Contractor, not to		
	exceed five percent (5%) of Item (h)		
(j)	<u>Subtotal</u>		
(k)	Add Bond and Insurance, not to exceed two percent		
	(2%) of Item (j)		
(1)	TOTAL		
(m)	<u>Time</u> (zero unless indicated; "TBD" not permitted)	Cal	endar
		Days	

[REMAINDER OF PAGE LEFT BLANK INTENTIONALLY]

		,
Project	Number:	23-006

	WORK PERFORMED BY CONTRACTOR	ADD	DEDUCT
(a)	Material (attach itemized quantity and unit cost plus		
	sales tax)		
(b)	Add Labor (attach itemized hours and rates, fully		
	Burdened, and specify the hourly rate for each additional		
	labor burden, for example, payroll taxes, fringe benefits,		
	etc.)		
(c)	Add Equipment (attach suppliers' invoice)		
(d)	Add General Conditions (if Time is Compensable)		
, ,	(attach supporting documentation)		
(e)	Subtotal		
(f)	Add Overhead and Profit for Contractor, not to		
	exceed fifteen percent (15%) of Item (e)		
(g)	Subtotal		
(h)	Add Bond and Insurance, not to exceed two percent		
, ,	(2%) of Item (g)		
(i)	TOTAL		
(j)	Time (zero unless indicated; "TBD" not permitted)	Cale	endar
3/		Days	-

The undersigned Contractor approves the foregoing as to the changes, if any, to 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 section 12650 et seg. It is understood that the changes herein to the Contract shall only be effective when approved by the governing board of the District.

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, direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project including, without limitation, cumulative impacts. Contractor is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.

SUBMITTED BY:	
Contractor:	
[Name]	

[Address] [City, State, Zip]

DOCUMENT 00 63 63

CHANGE ORDER FORM



Change Order

Solano Community College District

4000 Suisun Valley Road Fairfield, CA 94534 Tel: 707-864-7189 Fax: 707-646-771C

Change Order # [NUMBER] [NUMBER] Project No.:

Date: [DATE]

Project: Solano Community College District

[BUILDING/CAMPUS] [PROJECT]

[CONTRACTOR] To:

[STREET ADDRESS] [CITY, STATE ZIP]

[Project Manager / Construction Manager]

DSA File No.:

[DSA APPLICATION NO] DSA App. No.:

[ARCHITECT]

[STREET ADDRESS] [CITY, STATE ZIP]

The Contract is Changed as Follows:

PCO No.

[PCO NO] [PCO DESCRIPTION]

[PCO AMT]

[PCO NO] [PCO DESCRIPTION]

[PCO AMT]

TOTAL COST OF CHANGE ORDER ADD Deduct

FINAL CHANGE ORDER AMOUNT \$0.00

Original Contract Sum:

Total change By Previous Change Orders: Contract Sum Prior to This Change Order:

Original Contract Sum will be Increased by This Change Order: The New Contract Sum Including This Change Order Will Be:

The New Contract Completion Date Will Be:

Contract Time Will be Unchanged by This Change Order:

The Current Contract Completion Date is:

[ORIG CONTRACT]

\$ \$

Days

and services and p Submission of sum	time allowed, if any, for completion of the berform all work necessary to complete a ns which have no basis in fact or which C of the False Claims Act set forth under C	ny additional work specified for the ontractor knows are false are at	ne consideration stated therein. the sole risk of Contractor and
Until such time as	is subject to approval by the governing by this change order is approved by the Dis s change order is not effective and not bit	trict's governing board and execu	
and all time and co on the items herein and its subcontract	erstood that the compensation and time, ost impacts of the items herein, and Cont n. The value of the extra work or change tors, both direct and indirect, resulting frow ithout limitation, cumulative impacts. An	ractor waives any and all further s expressly includes any and all om additional time required on the	compensation or time extension based of the Contractor's costs and expenses, e project or resulting from delay to the
CONSTRUCTION			
MANAGER	[Representative Name] [Firm Name] [Firm Address]	Date:	
ARCHITECT	[Representative Name] [Firm Name] [Firm Address]	Date:	
DSA PROJECT INSPECTOR	[Representative Name] [Firm Name] [Firm Address]	Date:	
CONTRACTOR	[Representative Name] [Firm Name] [Firm Address]	Date:	
OWNER	Lucky Lofton Executive Bonds Manager Solano Community College District	Date:	

DOCUMENT 00 65 19.26

AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS

THIS / ENTER	AGREEMENT AND RELEASE (RED INTO THIS	OF CLAIMS ("Agreement and Release") IS MADE AND DAY OF . 20 by and between the
SOLA	NO COMMUNITY COLLEGE ("Contractor	DAY OF, 20 by and between the E DISTRICT ("District") and
		· · · · · · · · · · · · · · · · · · ·
		RECITALS
		ntractor entered into PROJECT/CONTRACT NO.: Pool 006 ("Contract" or "Project") in the County of Solano,
Notice		the Contract was completed on, and a with the County Recorder on
NOW,	THEREFORE, it is mutually a	greed between District and Contractor as follows:
	<u>A</u>	GREEMENT AND RELEASE
1.	Contractor will only be asse	essed liquidated damages as detailed below:
	Original Contract Sum	\$
	Modified Contract Sum	\$
	Payment to Date	\$
	Liquidated Damages	\$
	Payment Due Contractor	\$
2.	undisputed sum of	ereof, District shall forthwith pay to Contractor the Dollars (\$) under the represented by any notice to withhold funds on file with ch payment.
3.	outstanding claims in dispu under the Contract, except obligations described in Par this Agreement and Release full, final and general release obligations, costs, expense District and all of its respec- consultants and transferees	nd hereby agrees that there are no unresolved or te against District arising from the performance of work for the claims described in Paragraph 6 and continuing ragraph 8. It is the intention of the parties in executing that this Agreement and Release shall be effective as a se of all claims, demands, actions, causes of action, s, damages, losses and liabilities of Contractor against tive agents, employees, trustees, inspectors, assignees, s, except for any Disputed Claim that may be set forth in uing obligations described in Paragraph 6 hereof.

Pool Deck Replacement Project Project Number: 23-006

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

<u>Claim No.</u>	Description of Claim	Amount of Claim	<u>Date Claim</u> <u>Submitted</u>
		\$	
		\$	
		\$	
		\$	

[If further space is required, attach additional sheets showing the required information.]

- 5. 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 District, 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.
- 6. Guarantees and warranties for the Work, and any other continuing obligation of Contractor including, without limitation, the duty to defend, indemnify and hold harmless the District, shall remain in full force and effect as specified in the Contract Documents.
- 7. Contractor hereby waives the provisions of California Civil Code section 1542 which provides as follows:

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

8. 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.

Pool Deck Replacement Project Project Number: 23-006

9. All rights of District shall survive completion of the Work or termination of Contract, and execution of this Release.

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

SOLANO COMMUNITY COLLEGE DISTRICT

Signature:		
Print Name:		
Title:		
CONTRACTOR: _		
Signature:		
Print Name:		
Title:		



DOCUMENT 00 65 36

GUARANTEE FORM

	("Contractor") hereby agrees that the
("Work" of Con Community College District	ntractor) which Contractor has installed for the Solano t ("District") for the following project:
PROJECT: Pool Deck	Replacement Project
	been performed in accordance with the requirements of the the Work as installed will fulfill the requirements of the
defective in workmanship or displaced in connection with sate of completion as defined	pair or replace any or all of such Work that may prove to be material together with any other adjacent Work that may be such replacement within a period of ONE (1) year(s) from the in Public Contract Code section 7107, subdivision (c), ordinary ouse or neglect excepted. The date of completion is
within a reasonable period of (7) days after being notified i District to proceed to have sa	ed's failure to comply with the above-mentioned conditions time, as determined by the District, but not later than seven n writing by the District, the undersigned authorizes the id defects repaired and made good at the expense of the ed shall pay the costs and charges therefor upon demand.
Date:	
Proper Name of Contractor:	
Signature:	
Print Name:	
Title:	
Representatives to be contact	ted for service subject to terms of Contract:
Name:	
Address:	
Phone No.:	
Email:	



DOCUMENT 00 72 13

GENERAL CONDITIONS

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Early Learning Center Project Project Number: 23-003

DOCUMENT 00 72 13

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, or extreme temperature conditions in excess of the norm for the location and time of year it occurred based on the closest weather station data averaged over the past five years, (2) that is unanticipated and would cause unsafe work conditions and/or is unsuitable for scheduled work that should not be performed during inclement weather (i.e., exterior finishes), and (3) at the Project.
- **1.1.2 Allowance Expenditure Directive:** Written authorization for expenditure of allowance, if any.
- **1.1.3 Approval, Approved, and/or Accepted**: Written authorization, unless stated otherwise.
- **1.1.4** Architect (or "Design Professional in General Responsible Charge"): 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 Design Professional in General Responsible Charge as defined in DSA PR 13-02 on this Project or the Architect's authorized representative.
- **1.1.5 As-Builts**: Reproducible blue line prints of drawings to be prepared on a monthly basis pursuant to the Contract Documents, that reflect changes made during the performance of the Work, recording differences between the original design of the Work and the Work as constructed since the preceding monthly submittal. See **Record Drawings**.
- **1.1.6 Bidder**: A contractor who intends to provide a proposal to the District to perform the Work of this Contract.
- **1.1.7 Burdened**: The labor rate for Contractor or any Subcontractor inclusive of any and all burden costs including, but not limited to, health and welfare pay, vacation and holiday pay, pension contributions, training rates, benefits of any kind, insurance of any kind, workers' compensation, liability insurance, truck expenses, supply expenses of any kind, payroll taxes, and any other taxes of any kind.
- **1.1.8 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.

- **1.1.9 Claim**: A Dispute that remains unresolved at the conclusion of the all the applicable Dispute Resolution requirements provided herein.
- **1.1.10 Construction Change Directive**: A written order prepared and issued by the District, the Construction Manager, and/or the Architect and signed by the District and the Architect, directing a change in the Work.
- **1.1.11 Construction Manager**: The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the District. 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 District.
- **1.1.12 Construction Schedule**: The progress schedule of construction of the Project as provided by Contractor and approved by District.
- **1.1.13 Contract, Contract Documents**: The Contract consists exclusively of the documents evidencing the agreement of the District and Contractor, identified as the Contract Documents. The Contract Documents consist of the following documents:
 - 1.1.13.1 Notice to Bidders
 - **1.1.13.2** Instructions to Bidders
 - **1.1.13.3** Bid Form and Proposal
 - **1.1.13.4** Bid Bond
 - **1.1.13.5** Designated Subcontractors List
 - **1.1.13.6** Site Visit Certification (if a site visit was required)
 - **1.1.13.7** Non-Collusion Declaration
 - **1.1.13.8** Notice of Award
 - **1.1.13.9** Notice to Proceed
 - **1.1.13.10** Agreement
 - **1.1.13.11** Escrow of Bid Documentation
 - **1.1.13.12** Escrow Agreement for Security Deposits in Lieu of Retention (if applicable)
 - **1.1.13.13** Performance Bond
 - 1.1.13.14 Payment Bond (Contractor's Labor & Material Bond)
 - **1.1.13.15** General Conditions
 - **1.1.13.16** Special Conditions
 - **1.1.13.17** Hazardous Materials Procedures and Requirements
 - **1.1.13.18** Workers' Compensation Certification
 - **1.1.13.19** Prevailing Wage Certification
 - **1.1.13.20** Disabled Veteran Business Enterprise Participation Certification (if applicable)
 - **1.1.13.21** Small, Local, Diverse Business Program (SLDBE) (if applicable)
 - **1.1.13.22** Project Labor Agreement (PLA) (if applicable)
 - **1.1.13.23** Drug-Free Workplace Certification
 - **1.1.13.24** Tobacco-Free Environment Certification
 - **1.1.13.25** Hazardous Materials Certification
 - **1.1.13.26** Lead-Based Materials Certification
 - **1.1.13.27** Imported Materials Certification (if applicable)
 - **1.1.13.28** Sex Offender Registration Act Certification
 - **1.1.13.29** Buy American Certification (if certain federal funds used)

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- **1.1.13.30** Roofing Project Certification (if applicable)
- **1.1.13.31** Registered Subcontractors List
- **1.1.13.32** Iran Contracting Act Certification (if applicable)
- **1.1.13.33** Federal Debarment Certification (if applicable)
- **1.1.13.34** Post Bid Interview
- **1.1.13.35** All Plans, Technical Specifications, and Drawings
- **1.1.13.36** Any and all addenda to any of the above documents
- **1.1.13.37** Any and all change orders or written modifications to the above documents if approved in writing by the District
- **1.1.14 Contract Price**: The total monies payable to the Contractor under the terms and conditions of the Contract Documents.
- **1.1.15 Contract Time**: The time period stated in the Agreement for the completion of the Work.
- **1.1.16 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.
- **1.1.17 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.
- **1.1.18** Day(s): Unless otherwise designated, day(s) means calendar day(s).
- **1.1.19 Department of Industrial Relations (or "DIR")**: is responsible, among other things, for labor compliance monitoring and enforcement of California prevailing wage laws and regulations for public works contracts.
- **1.1.20 Design Professional in General Responsible Charge**: See definition of **Architect** above.
- **1.1.21 Dispute**: A separate demand by Contractor for a time extension, or 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 Contractor is not otherwise entitled to; or an amount of payment disputed by the District.
- **1.1.22 District**: The public agency or the district for which the Work is performed. The governing board of the District or its designees will act for the District in all matters pertaining to the Contract. The District may, at any time,
 - **1.1.22.1** 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 District; and/or
 - **1.1.22.2** Direct the Construction Manager or the Architect to communicate with or direct the Contractor on matters for which the Contract Documents indicate the District will communicate with or direct the Contractor.

- **1.1.23 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.
- **1.1.24 DSA**: Division of the State Architect.
- **1.1.25 Force Account Directive**: A process that may be used when the District and the Contractor cannot agree on a price for a specific portion of work or before the Contractor prepares a price for a specific portion of work and whereby the Contractor performs the work as indicated herein on a time and materials basis.
- **1.1.26 Job Cost Reports**: Any and all reports or records detailing the costs associated with work performed on or related to the Project that Contractor shall maintain for the Project. Specifically, Job Cost Reports shall contain, but are not limited by or to, the following information: a description of the work performed or to be performed on the Project; quantity, if applicable, of work performed (hours, square feet, cubic yards, pounds, etc.) for the Project; Project budget; costs for the Project to date; estimated costs to complete the Project; and expected costs at completion. The Job Cost Reports shall also reflect all Contract cost codes, change orders, elements of non-conforming work, back charges, and additional services.
- **1.1.27 Labor Commissioner's Office** (or "Labor Commissioner", also known as the Division of Labor Standards Enforcement ("DLSE")): Division of the DIR responsible for adjudicating wage claims, investigating discrimination and public works complaints, and enforcing Labor Code statutes and Industrial Welfare Commission orders.
- **1.1.28 Municipal Separate Storm Sewer System** (or "MS4"): A system of conveyances used to collect and/or convey storm water, including, without limitation, catch basins, curbs, gutters, ditches, man-made channels, and storm drains.
- **1.1.29** Plans: See Drawings.
- **1.1.30 Premises**: The real property owned by the District on which the Site is located.
- **1.1.31 Product(s)**: New material, machinery, components, equipment, fixtures and systems forming the Work, including existing materials or components required and approved by the District for reuse.
- **1.1.32 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.
- **1.1.33 Program Manager**: The individual, partnership, corporation, joint venture, or any combination thereof, or its authorized representative, named as such by the District. 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 District.

- **1.1.34 Project**: The planned undertaking as provided for in the Contract Documents.
- **1.1.35 Project Inspector (or "Inspector")**: The individual(s) retained by the District in accordance with title 24 of the California Code of Regulations to monitor and inspect the Project.
- **1.1.36 Project Labor Agreement (or "PLA")**: a prehire collective bargaining agreement in accordance with Public Contract Code section 2500 *et seq.* that establishes terms and conditions of employment for a specific construction project or projects and/or is an agreement described in Section 158(f) of Title 29 of the United States Code.
- **1.1.37 Proposed Change Order (or "PCO")**: a written request prepared by the Contractor requesting that the District and the Architect issue a Change Order based upon a proposed change to the Work.
- **1.1.38 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.
- **1.1.39** Qualified SWPPP Practitioners (or "QSP"): certified personnel that attended a State Water Resources Control Board sponsored or approved training class and passed the qualifying exam.
- **1.1.40 Record Drawings**: Reproducible drawings (or Plans) prepared pursuant to the requirements of the Contract Documents that reflect all changes made during the performance of the Work, recording differences between the original design of the Work and the Work as constructed upon completion of the Project. See also **As-Builts**.
- **1.1.41** Request for Information (or "RFI"): 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.
- **1.1.42** Request for Substitution for Specified Item: 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.
- **1.1.43 Safety Orders**: Written and/or verbal orders for construction issued by the California Division of Occupational Safety and Health ("CalOSHA") or by the United States Occupational Safety and Health Administration ("OSHA").
- **1.1.44 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.

- **1.1.45 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.
- **1.1.46 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.
- **1.1.47 Site**: The Project site as shown on the Drawings.
- **1.1.48 Small, Local, and Diverse Business Program (SLDBE)**: The District's SLDBE Program will have a goal of 20% of the contract price performed by disadvantaged and/or local firms (prime and subcontractors, suppliers).
- **1.1.49 Specifications**: That portion of the Contract Documents, Division 1 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.
- **1.1.50 State**: The State of California.
- **1.1.51** Storm Water Pollution Prevention Plan (or "SWPPP"): A document which identifies sources and activities at a particular facility that may contribute pollutants to storm water and contains specific control measures and time frames to prevent or treat such pollutants.
- **1.1.52 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.
- **1.1.53 Submittal Schedule**: The schedule of submittals as provided by Contractor and approved by District.
- **1.1.54 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 section 995.120.
- **1.1.55 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 <u>Laws Concerning the Contract</u>

Contract is subject to all provisions of the Constitution and laws of California and the United States governing, controlling, or affecting District, or the property, funds, operations, or powers of District, 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 District, 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 Work or money to become due hereunder without the prior written consent of the District. Assignment without District'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 District 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 District.

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 one (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.
 - **1.5.1.5** Electronic mail may be used for convenience but is not a substitute for the notice and service requirements herein.

1.6 No Waiver

The failure of District 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 District, Architect, or Construction Manager shall constitute a waiver of any right or duty

afforded the District 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

Unless the Special Conditions contain different provisions, Contractor shall not substitute different items for any items identified in the Contract Documents without prior written approval of the District.

1.8 <u>Materials and Work</u>

- **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, in a good and workmanlike manner, within the Contract Time.
- **1.8.2** Unless otherwise specified, all materials shall be new and of the best quality of their respective kinds and grades as noted or specified, workmanship shall be of good quality, and Contractor shall use all diligence to inform itself fully as to the required manufacturer's instructions and to comply therewith.
- **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 from the elements, theft, vandalism, or other loss or damage 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 District and after relevant submittals have been reviewed, 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 five (5) days' demand from District, present documentary evidence showing that orders have been placed.
- **1.8.6** District reserves the right but has no obligation, in response to Contractor's neglect or failure in complying with the above instructions, to place orders for such materials and/or equipment as the District may deem advisable in order that the Work may be completed at the date specified in the Contract, and all expenses incidental to the procuring of said materials and/or equipment shall be paid for by Contractor or deducted 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 District, 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 District as to owner thereof.
 - **1.8.7.1** If a lien or a claim based on a stop payment notice of any nature should at any time be filed against the Work or any District 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 District 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 payment notice to be released or discharged immediately therefrom.
 - **1.8.7.2** If the Contractor fails to furnish to the District within ten (10) calendar days after demand by the District, satisfactory evidence that a lien or a claim based on a stop payment notice has been so released, discharged, or secured, the District 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 District from any sum payable to Contractor under the Contract.
- **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 District (e.g., stop payment 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 District. 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. Should the District, in its discretion, allow the Contractor to store materials and/or equipment for the Work off-site, Contractor will store said materials and/or equipment at a bonded warehouse and with appropriate insurance coverage at no cost to District. Contractor shall keep an accurate inventory of all materials and/or equipment in a manner satisfactory to District or its authorized representative and shall, at the District's request, forward it to the District.

1.8.10 [RESERVED]

2. [RESERVED]

3. ARCHITECT

- The Architect shall represent the District during the Project and will observe the progress and quality of the Work on behalf of the District. Architect shall have the authority to act on behalf of District to the extent expressly provided in the Contract Documents and to the extent determined by District. 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** Architect shall, with the District and on behalf of the District, determine the amount, quality, acceptability, and fitness of all parts of the Work, and interpret the Specifications, Drawings, and shall, with the District, interpret all other Contract Documents.
- **3.3** Architect shall have all authority and responsibility established by law, including title 24 of the California Code of Regulations.
- **3.4** Contractor shall provide District 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** If a Construction Manager is used on this Project ("Construction Manager" or "CM"), the Construction Manager will provide administration of the Contract on the District's behalf. After execution of the Contract and Notice to Proceed, all correspondence and/or instructions from Contractor and/or District 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 The Construction Manager, however, will have authority to reject materials and/or workmanship not conforming to the Contract Documents, as determined by the District, the Architect, and/or the Project Inspector. 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; the Contractor or Subcontractor's respective agents, employees; or other persons performing any of the Work. The Construction Manager shall have free access to any or all parts of Work at any time.
- **4.3** If the District does not use a Construction Manager on this Project, all references within the Contract Documents to Construction Manager or CM shall be read as District.

5. INSPECTOR, INSPECTIONS, AND TESTS

5.1 Project Inspector

- **5.1.1** One or more Project Inspector(s), including special Project Inspector(s), as required, will be assigned to the Work by District, in accordance with requirements of title 24, part 1, of the California Code of Regulations, to enforce the building code and monitor compliance with Plans and Specifications for the Project previously approved by the DSA. Duties of Project Inspector(s) are specifically defined in section 4-342 of said part 1 of title 24.
- **5.1.2** No Work shall be carried on except with the knowledge and under the inspection of the Project Inspector(s). The Project Inspector(s) shall have free access to any or all parts of Work at any time. Contractor shall furnish Project Inspector(s) reasonable opportunities for obtaining such information as may be necessary to keep Project Inspector(s) fully informed respecting progress and manner of work and character of materials, including, but not limited to, submission of form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector at least 48 hours in advance of the commencement and completion of construction of each and every aspect of the Work. Forms are available on the DSA's website at: http://www.dgs.ca.gov/dsa/Forms.aspx. Inspection of Work shall not relieve

Contractor from an obligation to fulfill this Contract. Project Inspector(s) and the DSA are authorized to suspend work whenever the Contractor and/or its Subcontractor(s) are not complying with the Contract Documents. Any work

stoppage by the Project Inspector(s) and/or DSA shall be without liability to the District. Contractor shall instruct its Subcontractors and employees accordingly.

5.1.3 If Contractor and/or any Subcontractor requests that the Project Inspector(s) perform any inspection off-site, this shall only be done if it is allowable pursuant to applicable regulations and DSA approval, if the Project Inspector(s) agree to do so, and at the expense of the Contractor.

5.2 Tests and Inspections

- **5.2.1** Tests and Inspections shall comply with title 24, part 1, California Code of Regulations, group 1, article 5, section 4-335, and with the provisions of the Specifications.
- **5.2.2** The District will select an independent testing laboratory to conduct the tests. Selection of the materials required to be tested shall be by the laboratory or the District's representative and not by the Contractor. The Contractor shall notify the District's representative a sufficient time in advance of its readiness for required observation or inspection.
- **5.2.3** The Contractor shall notify the District's representative a sufficient time in advance of the manufacture of material to be supplied under the Contract Documents, which must by terms of the Contract Documents be tested, in order that the District may arrange for the testing of same at the source of supply. This notice shall be provided, at a minimum, seventy-two (72) hours prior to the manufacture of the material that needs to be tested.
- **5.2.4** 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.
- **5.2.5** The District will select the testing laboratory and pay for the costs of all tests and inspections, excepting those inspections performed at Contractor's request and expense. Contractor shall reimburse the District for any and all laboratory costs or other testing costs for any materials found to be not in compliance with the Contract Documents. At the District's discretion, District may elect to deduct laboratory or other testing costs for noncompliant materials from the Contract Price, and such deduction shall not constitute a withholding.

5.3 <u>Costs for After Hours and/or Off Site Inspections</u>

If the Contractor performs Work outside the Inspector's regular working hours or requests the Inspector 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 District or the District may deduct those expenses from the next Progress Payment.

6. **CONTRACTOR**

Contractor shall construct and complete, in a good and workmanlike manner, 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 (excluding DSA), fees, licenses, facilities, transportation, taxes, bonds and insurance, and services necessary for the proper

6.1 Status of Contractor

execution and completion of the Work, except as indicated herein.

- **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 District, or any of the District'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 agents, and employees as they relate to the services to be provided during the course and scope of their employment. Contractor, its Subcontractors, agents, and its employees shall not be entitled to any rights or privileges of District employees. District 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 Contractors State License Board, 9821 Business Park Drive, Sacramento, California 95827, http://www.cslb.ca.gov.
- **6.1.3** As required by law, Contractor and all Subcontractors shall be properly registered as public works contractors by the Department of Industrial Relations at: https://efiling.dir.ca.gov/PWCR/ActionServlet?action=displayPWCRegistrationForm or current URL.
- **6.1.4** Contractor represents that Contractor and all Subcontractors shall not be presently debarred, suspended, proposed for disbarment, declared ineligible or excluded pursuant to either Labor Code section 1777.1 or Labor Code section 1777.7.

6.1.5 [RESERVED]

- **6.1.6** Contractor represents that it has no existing interest and will not acquire any interest, direct or indirect, which could conflict in any manner or degree with the performance of the Work required under this Contract and that no person having any such interest shall be employed by Contractor.
- **6.1.7** If Contractor intends to make any change in the name or legal nature of the Contractor's entity, Contractor must first notify the District in writing prior to making any contemplated change. The District shall determine in writing if Contractor's intended change is permissible while performing this Contract.

6.2 Project Inspection Card(s)

Contractor shall verify that forms DSA 152 (or the current version applicable at the time the Work is performed) are issued for the Project prior to the commencement of construction.

6.3 <u>Contractor's Supervision</u>

- **6.3.1** During progress of the Work, Contractor shall keep on the Premises, and at all other locations where any Work related to the Contract is being performed, an experienced and competent project manager and construction superintendent who are employees of the Contractor, to whom the District does not object and at least one of whom shall be fluent in English, written and verbal.
- **6.3.2** The project manager and construction superintendent shall both speak fluently the predominant language of the Contractor's employees.
- 6.3.3 Before commencing the Work herein, Contractor shall give written notice to District of the name 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 District. If the Contractor's project manager and/or construction superintendent proves to be unsatisfactory to Contractor, or to District, any of the District's employees, agents, the Construction Manager, or the Architect, the unsatisfactory project manager and/or construction superintendent shall be replaced. However, Contractor shall notify District in writing before any change occurs, but no less than two (2) business days prior. Any replacement of the project manager and/or construction superintendent shall be made promptly and must be satisfactory to the District. 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.
- **6.3.4** 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 District, Construction Manager, and Architect any error, inconsistency, or omission that Contractor or its employees and Subcontractors may discover, in writing, with a copy to District's Project Inspector(s). The Contractor shall have responsibility for discovery of errors, inconsistencies, or omissions.

6.4 <u>Duty to Provide Fit Workers</u>

- **6.4.1** 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. District may require Contractor to permanently remove unfit persons from Project Site.
- **6.4.2** Any person in the employ of Contractor or Subcontractor(s) whom District 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 District.
- **6.4.3** The Contractor shall furnish labor that can work in harmony with all other elements of labor employed or to be employed in the Work.

6.5 Field Office

6.5.1 Contractor shall provide a temporary office on the Site for the District's use exclusively, during the term of the Contract. – *NOT APPLICABLE*

6.6 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 District to assure that there will be no delays.

6.7 Documents on Work

6.7.1 Contractor shall at all times keep on the Site, or at another location as the District may authorize in writing, one (1) 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 District, Construction Manager, Architect, Architect's representatives, the Project Inspector(s), and all authorities having jurisdiction. Contractor shall be acquainted with and comply with the provisions of these titles as they relate to this Project. (See particularly the duties of Contractor, Title 24, Part 1, California Code of Regulations, section 4-343.) Contractor shall also be acquainted with and comply with all California Code of Regulations provisions relating to conditions on this Project, particularly Titles 8 and 17. Contractor shall coordinate with Architect and Construction Manager and shall submit its verified report(s) according to the requirements of Title 24.

6.7.2 Daily Job Reports.

- **6.7.2.1** 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:
 - **6.7.2.1.1** A brief description of all Work performed on that day.
 - **6.7.2.1.2** A summary of all other pertinent events and/or occurrences on that day.
 - **6.7.2.1.3** The weather conditions on that day.
 - **6.7.2.1.4** A list of all Subcontractor(s) working on that day, including DIR registration numbers.
 - **6.7.2.1.5** A list of each Contractor employee working on that day and the total hours worked for each employee.
 - **6.7.2.1.6** A complete list of all equipment on Site that day, whether in use or not.
 - **6.7.2.1.7** A complete list of all materials, supplies, and equipment delivered on that day.
 - **6.7.2.1.8** A complete list of all inspections and tests performed on that day.

6.7.2.2 Each day Contractor shall provide a copy of the previous day's Daily Job Report to the District or the Construction Manager.

6.8 <u>Preservation of Records</u>

Contractor shall maintain, and District shall have the right to inspect, Contractor's financial records for the Project, including, without limitation, Job Cost Reports for the Project in compliance with the criteria set forth herein. The District 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, Job Cost Reports, 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 District. These documents may be duplicative and/or be in addition to any Bid Documents held in escrow by the District. 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.

6.9 <u>Integration of Work</u>

- **6.9.1** 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 District and/or Architect may direct.
- **6.9.2** Contractor shall make its own layout of lines and elevations and shall be responsible for the accuracy of both Contractor's and Subcontractors' work resulting therefrom.
- 6.9.3 Contractor and all Subcontractors shall take all field dimensions required in performance of the Work, and shall verify all dimensions and conditions on the Site. All dimensions affecting proper fabrication and installation of all Work must be verified prior to fabrication by taking field measurements of the true conditions. If there are any discrepancies between dimensions in drawings and existing conditions which will affect the Work, Contractor shall bring such discrepancies to the attention of the District and Architect for adjustment before proceeding with the Work. In doing so, it is recognized that Contractor is not acting in the capacity of a licensed design professional, and that Contractor's examination is made in good faith to facilitate construction and does not create an affirmative responsibility of a design professional to detect errors, omissions or inconsistencies in the Contract Documents or to ascertain compliance with applicable laws, building codes or regulations. However, nothing in this provision shall abrogate Contractor's responsibilities for discovering and reporting any error, inconsistency, or omission pursuant to the Contract within the Contractor's standard of care including, without limitation, any

applicable laws, ordinance, rules, or regulations. Following receipt of written notice from Contractor, the District and/or Architect shall inform Contractor what action, if any, Contractor shall take with regard to such discrepancies.

- **6.9.4** All costs caused by noncompliant, defective, or delayed Work shall be borne by Contractor, inclusive of repair work. Schedule delays resulting from unauthorized work shall be Contractor's responsibility.
- **6.9.5** 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 consent of District.

6.10 Notifications

- **6.10.1** Contractor shall notify the Architect and Project Inspector, in writing, of the commencement of construction of each and every aspect of the Work at least 48 hours in advance by submitting form DSA 156 (or the most current version applicable at the time the Work is performed) to the Project Inspector. Forms are available on the DSA's website at: http://www.dgs.ca.gov/dsa/Forms.aspx.
- **6.10.2** Contractor shall notify the Architect and Project Inspector, in writing, of the completion of construction of each and every aspect of the Work at least 48 hours in advance by submitting form DSA 156 (or current version) to the Project Inspector.

6.11 Obtaining of Permits, Licenses and Registrations

- **6.11.1** Contractor shall secure and pay for all permits (except DSA), licenses, registrations, approvals and certificates necessary for prosecution of Work, including but not limited to those listed in the Special Conditions, if any, before the date of the commencement of the Work or before the permits, licenses, registrations, approvals and certificates are legally required to continue the Work without interruption. The Contractor shall obtain and pay, only when legally required, for all licenses, registrations, approvals, 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, registrations, approvals and certificates shall be delivered to District before demand is made for final payment.
- **6.11.2** General Permit For Storm Water Discharges Associated With Construction and Land Disturbance Activities.
 - **6.11.2.1** Contractor acknowledges that all California community college districts are obligated to develop and implement the following requirements for the discharge of storm water to surface waters from its construction and land disturbance activities pursuant to the Clean Water Act and Porter Cologne Water Quality Act. District has determined that the construction of this Project requires enrollment in the Construction Storm Water Permit. District has filed certain submittals referred to as Permit Registration Documents ("PRDS") with the Regional Water Control Board ("Storm Water Pollution Prevention Plan" or "SWPPP").

- **6.11.2.2** Contractor shall comply with any District SWPPP that is approved by the District and applicable to the Project, at no additional cost to the District. Contractor shall pay any fees and any penalties that may imposed by a regulatory agency for its non-compliance with the SWPPP during the course of Work.
- **6.11.2.3** Contractor shall provide a Qualified Storm Water Practitioner ("QSP") at no additional cost to the District, who shall be onsite and implement and monitor any and all SWPPP requirements applicable to the Project, including but not limited to:
 - **6.11.2.3.1** All required visual observations, sampling, analysis, reporting and record keeping, including any Numeric Action Levels ("NALs"), if applicable;
 - **6.11.2.3.2** Rain Event Action Plan ("REAP") at least forty eight (48) hours prior to any forecasted rain event requiring implementation of the REAP, including any erosion and sediment control measures needed to protect all exposed portions of the site, if applicable;
 - **6.11.2.3.3** Active Treatment System ("ATS"), if applicable; and
 - **6.11.2.3.4** Best management practices ("BMPs").

6.12 Royalties and Patents

- **6.12.1** Contractor shall obtain and pay, only when legally required, all royalties and license fees necessary for prosecution of Work before the earlier of the date of the commencement of the Work or the date that the license is legally required to continue the Work without interruption. Contractor shall defend suits or claims of infringement of patent, copyright, or other rights and shall hold the District, the Architect, and the Construction Manager harmless and indemnify them from loss on account thereof except when a particular design, process, or make or model of product is required by the Contract Documents. However, if the Contractor has reason to believe that the required design, process, or product is an infringement of a patent or copyright, the Contractor shall indemnify and defend the District, Architect and Construction Manager against any loss or damage unless the Contractor promptly informs the District of its information.
- **6.12.2** The review by the District or Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be only its adequacy for the Work and shall not approve use by the Contractor in violation of any patent or other rights of any person or entity.

6.13 Work to Comply With Applicable Laws and Regulations

6.13.1 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

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covered by Contract Documents that may result in finished Work being at variance therewith, Contractor shall promptly notify District in writing and any changes deemed necessary by District shall be made as provided in Contract for changes in Work.

- 6.13.1.1 National Electrical Safety Code, U. S. Department of Commerce
- **6.13.1.2** National Board of Fire Underwriters' Regulations
- **6.13.1.3** International Building Code, latest addition, and the California Code of Regulations, title 24, and other amendments
- **6.13.1.4** Manual of Accident Prevention in Construction, latest edition, published by A.G.C. of America
- **6.13.1.5** Industrial Accident Commission's Safety Orders, State of California
- **6.13.1.6** Regulations of the State Fire Marshall (title 19, California Code of Regulations) and Pertinent Local Fire Safety Codes
- **6.13.1.7** Americans with Disabilities Act
- **6.13.1.8** Education Code of the State of California
- **6.13.1.9** Government Code of the State of California
- **6.13.1.10**Labor Code of the State of California, division 2, part 7, Public Works and Public Agencies
- **6.13.1.11** Public Contract Code of the State of California
- 6.13.1.12 California Art Preservation Act
- **6.13.1.13**U. S. Copyright Act
- 6.13.1.14U. S. Visual Artists Rights Act
- **6.13.2** 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 section 21000 et seq.).
- **6.13.3** 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 and arising from the correction of said Work.
- **6.13.4** Where Specifications or Drawings state that materials, processes, or procedures must be approved by the DSA, State Fire Marshall, or other body or agency, Contractor shall be responsible for satisfying requirements of such bodies or agencies applicable at the time the Work is performed, and as determined by those bodies or agencies.

6.14 Safety/Protection of Persons and Property

- **6.14.1** The Contractor will be solely and completely responsible for conditions of the 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.
- **6.14.2** The wearing of hard hats will be mandatory at all times for all personnel on Site. Contractor shall supply sufficient hard hats to properly equip all employees and visitors.
- **6.14.3** Any construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures in, on, or near the Site.
- **6.14.4** Implementation and maintenance of safety programs shall be the sole responsibility of the Contractor.
- **6.14.5** The Contractor shall furnish to the District a copy of the Contractor's safety plan within the time frame indicated in the Contract Documents and specifically adapted for the Project.
- **6.14.6** 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 District. 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 section 7105.
- **6.14.7** 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.
- **6.14.8** Hazards Control Contractor shall store volatile wastes in covered metal containers and remove them from the Site daily. Contractor shall prevent accumulation of wastes that create hazardous conditions. Contractor shall provide adequate ventilation during use of volatile or noxious substances.
- **6.14.9** 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 District by Contractor.

6.14.10 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.

- **6.14.11** Contractor shall comply with any District storm water requirements that are approved by the District and applicable to the Project, at no additional cost to the District.
- **6.14.12** 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.
- **6.14.13** All salvage materials will become the property of the Contractor and shall be removed from the Site unless otherwise called for in the Contract Documents. However, the District reserves the right to designate certain items of value that shall be turned over to the District unless otherwise directed by District.
- **6.14.14** All connections to public utilities and/or existing on-site services, including, without limitation, internet, phone and data connections, shall be made and maintained in such a manner as to not interfere with the continuing use of same by the District during the entire progress of the Work.
- **6.14.15** 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.
- **6.14.16** The Contractor shall protect and preserve the Work from all damage or accident, providing any temporary roofs, window and door coverings, boxings, or other construction as required by the Architect. The Contractor shall be responsible for existing structures, walks, roads, trees, landscaping, and/or improvements in working areas; and shall provide adequate protection therefore. If temporary removal is necessary of any of the above items, or damage occurs due to the Work, the Contractor shall replace same at its expense with same kind, quality, and size of Work or item damaged. This shall include any adjoining property of the District and others.
- **6.14.17** 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.
- **6.14.18** 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 District and Architect regarding signs, advertising, fires, and smoking, and require that all workers comply with all regulations while on Project Site.

6.14.19 Contractor, Contractor's employees, Subcontractors, Subcontractors' employees, or any person associated with the Work shall conduct themselves in a manner appropriate for a school site. No verbal or physical contact with neighbors, students, and faculty, profanity, or inappropriate attire and/or logos, or behavior will be permitted. District may require Contractor to temporarily or permanently remove non-complying persons from Project Site.

- **6.14.20** 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 District.
- **6.14.21** 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 District prior to the commencement of any Work on or about the adjacent property. The Contractor shall also indemnify the District as provided in the indemnification provision herein. These provisions shall be in addition to any other requirements of the owners of the adjacent property.

6.15 Working Evenings and Weekends

Contractor may be required to work increased hours, evenings, and/or weekends at no additional cost to the District. Contractor shall give the District 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 District'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 District for any increased or additional Inspector charges as a result of Contractor's increased hours, or evening and/or weekend work.

6.16 Cleaning Up

- **6.16.1** The Contractor shall provide all services, labor, materials, and equipment necessary for protecting and securing the Work, all school occupants, furnishings, equipment, and building structure from damage until its completion and final acceptance by District. 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 school 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 or where there is an increased risk of fire.
- **6.16.2** Contractor at all times shall keep Premises, including property immediately adjacent thereto, free from debris such as waste, rubbish (including personal rubbish of workers, e.g., food wrappers, etc.), and excess materials and equipment caused by the Work. Contractor shall not leave debris under, in, or about

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the Premises (or surrounding property or neighborhood), but shall promptly remove same from the Premises on a daily basis. If Contractor fails to clean up, District 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 District as it deems necessary for continued operations. Contractor shall comply with all related provisions of the Specifications.

- **6.16.3** If the Construction Manager, Architect, or District observes the accumulation of trash and debris, the District will give the Contractor a 24-hour written notice to mitigate the condition.
- **6.16.4** Should the Contractor fail to perform the required clean-up, or should the clean-up be deemed unsatisfactory by the District, the District may, at its sole discretion, 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.

6.17 No Relief from Obligations Based on Review by Other Persons

6.17.1 Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents by act or omission of the District, Architect, Construction Manager, Project Inspector, or DSA or other entities having jurisdiction including, but not limited to, administration of the Contract, review of submittals, or by tests, observation, inspection, or permit/interconnection approvals.

7. **SUBCONTRACTORS**

- **7.1** Contractor shall provide the District with information for all Subcontracts as indicated in the Contractor's Submittals and Schedules Section herein.
- **7.2** No contractual relationship exists between the District and any Subcontractor, supplier, or sub-subcontractor by reason of this Contract.
- 7.3 Contractor agrees to bind every Subcontractor by terms of this Contract as far as those terms that are applicable to Subcontractor's work including, without limitation, all labor, wage & hour, apprentice and related provisions and requirements. If Contractor shall subcontract any part of this Contract, Contractor shall be as fully responsible to District for acts and omissions of any Subcontractor and of persons either directly or indirectly employed by any Subcontractor, including Subcontractor caused Project delays, as it is for acts and omissions of persons directly employed by Contractor. The divisions or sections of the Specifications and/or the arrangement of the drawings are not intended to control the Contractor in dividing the Work among Subcontractors or limit the work performed by any trade.
- **7.4** District'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 is directed to familiarize itself with sections 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 sections 1720 through 1861 of the Labor

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Code of the State of California, as regards the payment of prevailing wages and related issues, and to comply with all applicable requirements therein including, without limitation, section 1775 and the Contractor's and Subcontractors' obligations and liability for violations of prevailing wage law and other applicable laws.

- **7.6** No Contractor whose Bid is accepted shall, without consent of the awarding authority and in full compliance with section 4100 et seq. of the Public Contract Code, including, without limitation, sections 4107, 4107.5, and 4109 of the Public Contract Code, and section 1771.1 of the Labor 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 (0.5%) of the Contractor's total bid as to which its original bid did not designate a Subcontractor.
- **7.7** The Contractor shall be responsible for the coordination of the trades, Subcontractors, sub-subcontractors, and material or equipment suppliers working on the Project.
 - **7.7.1** Contractor is responsible for ensuring that all Subcontractors are properly registered as public works contractors by the Department of Industrial Relations.
- **7.8** Contractor is solely responsible for settling any differences between the Contractor and its Subcontractor(s) or between Subcontractors.
- **7.9** 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** District 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 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 other contractors.
- **8.2** In addition to Contractor's obligation to protect its own Work, Contractor shall protect the work of any other contractor that Contractor encounters while working on the Project.
- **8.3** If any part of Contractor's Work depends for proper execution or results upon work of District or any other contractor, the Contractor shall inspect and, before proceeding with its Work, promptly report to the District in writing any defects in District'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 District for District's or any other contractor's work that Contractor failed to inspect or

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should have inspected. Contractor's failure to inspect and report shall constitute Contractor's acceptance of all District's or any other contractor's work as fit and proper for reception of Contractor's Work, except as to defects that may develop in District's or any other contractor's work after execution of Contractor's Work and not caused by execution of Contractor's Work.

- **8.4** To ensure proper execution of its subsequent work, Contractor shall measure and inspect work already in place and shall at once report to the District in writing any discrepancy between that executed work and the Contract Documents.
- **8.5** Contractor shall ascertain to its own satisfaction the scope of the Project and nature of District's or any other contracts that have been or may be awarded by District in prosecution of the Project to the end that Contractor may perform this Contract in light of the other contracts, if any.
- **8.6** 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 District or any other contractor working on the Project. If simultaneous execution of any contract or Premises 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 District of the resolution.

9. DRAWINGS AND SPECIFICATIONS

- **9.1** A complete list of all Drawings that form a part of the Contract is to be found as an index on the Drawings themselves, and/or may be provided to the Contractor and/or in the Table of Contents.
- **9.2** 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 and installing of same, including all incidental and accessory items thereto and/or labor therefor, as per best practices of the trade(s) involved, unless specifically noted otherwise.

- **9.5** 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 with the Contract Documents, Contractor shall promptly notify District and Architect in writing, and any necessary changes shall be made as provided in the Contract Documents.
- 9.6 In the case of discrepancy or ambiguity in the Contract Documents, the order of precedence in the Agreement shall prevail. 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 District with the functionally complete and operable Project described in the Drawings and Specifications. In case of ambiguity, conflict, or lack of information, District will furnish clarifications with reasonable promptness.
- **9.7** 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.
- **9.9** As required by Section 4-317(c), Part 1, Title 24, CCR: "Should any existing conditions such as deterioration or non-complying construction be discovered which is not covered by the DSA-approved documents wherein the finished work will not comply with Title 24, California Code of Regulations, a construction change document, or a separate set of plans and specifications, detailing and specifying the required repair work shall be submitted to and approved by DSA before proceeding with the repair work."

9.9 Ownership of Drawings

All copies of Plans, Drawings, Designs, Specifications, and copies of other incidental architectural and engineering work, or copies of other Contract Documents furnished by District, are the property of District. 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 District on request at completion of Work, or may be used by District as it may require without any additional costs to District. Neither the Contractor nor any Subcontractor, or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by the Architect. District 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.

10. CONTRACTOR'S SUBMITTALS AND SCHEDULES

Contractor's submittals shall comply with the provisions and requirements of the Specifications including, without limitation Submittals.

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

10.1.1 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 District for review, in a form supported by sufficient data to substantiate its accuracy as the District may require:

- **10.1.1.1** 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 District, 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 District.
 - **10.1.1.1.1** The District is not required to approve a preliminary schedule of construction with early completion, i.e., one that shows early completion dates for the Work and/or milestones. Contractor shall not be entitled to extra compensation if the District approves a Construction Schedule with an early completion date and Contractor completes the Project beyond the date shown in the schedule but within the Contract Time. A Construction Schedule showing the Work completed in less than the Contract Time, the time between the early completion date and the end of the Contract Time shall be Float
- **10.1.1.2** 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. Unless the Special Conditions contain different limits, this preliminary schedule of values shall include, at a minimum, the following information and the following structure:
 - **10.1.1.2.1** Divided into at least the following categories:

```
10.1.1.2.1.1
                Overhead and profit;
10.1.1.2.1.2
                Supervision;
10.1.1.2.1.3
                General conditions;
10.1.1.2.1.4
                Layout;
10.1.1.2.1.5
                Mobilization;
10.1.1.2.1.6
                Submittals:
10.1.1.2.1.7
                Bonds and insurance;
10.1.1.2.1.8
                Close-out/Certification documentation;
10.1.1.2.1.9
                Demolition;
10.1.1.2.1.10
                Installation:
10.1.1.2.1.11
                Rough-in:
10.1.1.2.1.12
                Finishes;
10.1.1.2.1.13
                Testing;
10.1.1.2.1.14
                Punchlist and District acceptance.
```

10.1.1.2.2 And also divided by each of the following areas:

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10.1.1.2.2.1 Site work; 
10.1.1.2.2.2 By each building; 
10.1.1.2.2.3 By each floor.
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10.1.1.2.3 The preliminary schedule of values shall not provide for values any greater than the following percentages of the Contract value:

10.1.1.2.3.1	Mobilization and layout combined to equal not more than 1%:
10.1.1.2.3.2	Submittals, samples and shop drawings combined to equal not more than 3%;
10.1.1.2.3.3	Bonds and insurance combined to equal not more than 2%.

- **10.1.1.2.3.4** Closeout documentation shall have a value in the preliminary schedule of not less than 5%.
- **10.1.1.2.4** 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 based on percentage complete, with the disbursement of Progress Payments and the Final Payment.
- **10.1.1.2.5** Contractor shall certify that the preliminary schedule of values as submitted to the District is accurate and reflects the costs as developed in preparing Contractor's bid. For example, without limiting the foregoing, Contractor shall not "front-load" the preliminary schedule of values with dollar amounts greater than the value of activities performed early in the Project.
- **10.1.1.2.6** The preliminary schedule of values shall be subject to the District's review and approval of the form and content thereof. In the event that the District objects to any portion of the preliminary schedule of values, the District shall notify the Contractor, in writing, of the District's objection(s) to the preliminary schedule of values. Within five (5) calendar days of the date of the District's written objection(s), Contractor shall submit a revised preliminary schedule of values to the District for review and approval. The foregoing procedure for the preparation, review and approval of the preliminary schedule of values shall continue until the District has approved the entirety of the preliminary schedule of values.
- **10.1.1.2.7** Once the preliminary schedule of values is approved by the District, 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 District, which may be granted or withheld in the sole discretion of the District.
- **10.1.1.3** Preliminary Schedule of Submittals. A preliminary schedule of submittals, including Shop Drawings, Product Data, and Samples submittals. Once approved by District, this shall become the Submittal Schedule. All submittals shall be forwarded to the District 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 District so as not to delay the Construction Schedule. Upon request by the District, Contractor shall provide an electronic copy of all submittals to the District. All submittals shall be submitted no later than 90 days after the Notice to Proceed.

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- **10.1.1.4** <u>Safety Plan.</u> Contractor's Safety Plan specifically adapted for the Project. Contractor's Safety Plan shall comply with the following requirements:
 - **10.1.1.4.1** All applicable requirements of California Division of Occupational Safety and Health ("CalOSHA") and/or of the United States Occupational Safety and Health Administration ("OSHA").
 - **10.1.1.4.2** All provisions regarding Project safety, including all applicable provisions in these General Conditions.
 - **10.1.1.4.3** Contractor's Safety Plan shall be in English and in the language(s) of the Contractor's and its Subcontractors' employees.
- **10.1.1.5** <u>Complete Registered Subcontractors List.</u> The name, address, telephone number, facsimile number, California State Contractors License number, classification, DIR registration number and monetary value of all Subcontracts of any tier for parties furnishing labor, material, or equipment for completion of the Project.
- **10.1.2** Contractor must provide all schedules both in hard copy and electronically, in a format (e.g., Microsoft Project or Primavera) approved in advance by the District.
- **10.1.3** The District will review the schedules submitted and the Contractor shall make changes and corrections in the schedules as requested by the District and resubmit the schedules until approved by the District.
- **10.1.4** The District shall have the right at any time to revise the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.
- **10.1.5** All schedules must be approved by the District before Contractor can rely on them as a basis for payment.

10.2 Monthly Progress Schedule(s)

- **10.2.1** Contractor shall provide Monthly Progress Schedule(s) to the District. A Monthly Progress Schedule shall update the approved Construction Schedule or the last Monthly Progress Schedule, showing all work completed and to be completed as well as updating the Registered Subcontractors List. The monthly Progress Schedule shall be sent within the timeframe requested by the District and shall be in a format acceptable to the District 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 District approval of the Monthly Progress Schedule shall be the same as the process for approval of the Construction Schedule.
- **10.2.2** Contractor shall submit Monthly Progress Schedule(s) with all payment applications.
- **10.2.3** Contractor must provide all schedules both in hard copy and electronically, in a format (e.g., Microsoft Project or Primavera) approved in advance by the District.

10.2.4 The District will review the schedules submitted and the Contractor shall make changes and corrections in the schedules as requested by the District and resubmit the schedules until approved by the District.

- **10.2.5** The District shall have the right at any time to revise the schedule of values if, in the District's sole opinion, the schedule of values does not accurately reflect the value of the Work performed.
- **10.2.6** All schedules must be approved by the District before Contractor can rely on them as a basis for payment.

10.3 <u>Material Safety Data Sheets (MSDS)</u>

Contractor is required to ensure Material Safety Data Sheets are available in a readily accessible place at the 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 substances 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 District.

10.4 Submittals

Architect's favorable review shall neither be construed as a complete check nor relieve the Contractor, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless the Contractor has, in writing, called Architect's attention to the deviations at the time of submission and the Architect has given specific written response. "Favorable review" shall mean merely that Architect has no objection to Contractor using, upon Contractor's own full responsibility, plan or method of Work proposed, or furnishing materials or equipment proposed.

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.

Prior to commencing the Work, Contractor and the District's representative shall survey the Site to document the condition of the Site. Contractor will record the survey in digital videotape format and provide an electronic copy to the District within fourteen (14) days of the survey. This electronic record shall serve as a basis for determining any damages caused by the Contractor during the Project. The Contractor may also document any pre-existing conditions in writing, provided that both the Contractor and the District's representative agree on said conditions and sign a memorandum documenting the same.

11.2 Soils Investigation Report

- **11.2.1** When a soils investigation report obtained from test holes at Site or for the Project is available, that report may be available to the Contractor but shall not be a part of this Contract and shall not alleviate or excuse the Contractor's obligation to perform its own investigation. 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 visual examination of Site and has made whatever tests Contractor deems appropriate to determine underground condition of soil. Although any such report is not a part of this Contract, recommendations from the report may be included in the Drawings, Specifications, or other Contract Documents. It is Contractor's sole responsibility to thoroughly review all Contract Documents, Drawings, and Specifications.
- **11.2.2** Contractor agrees that no claim against District 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

District 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 District'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 District and Architect. Any required Record and/or As-Builts 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. Contractor shall follow best practices, including but not limited to potholing to avoid utilities. District shall not be liable for any claim for allowances because of Contractor's error, failure to follow best practices, 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 District. Contractor shall replace any benchmarks or monuments that

are lost or destroyed subsequent to proper notification of District and with District'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 District, 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 District 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 <u>Existing Utility Lines</u>

- **11.9.1** Pursuant to Government Code section 4215, District 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 District 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 District shall not be considered exact, but approximate within a reasonable margin and shall not relieve Contractor of responsibilities to exercise reasonable care or costs of repair due to Contractor's failure to do so. District shall compensate Contractor for the costs of locating and 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 District to indicate the presence of existing service laterals, appurtenances, or other utility lines, within the exception of main or trunk utility lines or 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 District in Contract Plans and Specifications, Contractor shall immediately notify the District and the utility in writing. The cost of repair for damage to above-mentioned visible facilities without prior written notification to the District shall be borne by the Contractor.

11.10 Notification

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

11.11 <u>Hazardous Materials</u>

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 District.

12. TRENCHES

12.1 Trenches Greater Than Five Feet

Pursuant to Labor Code section 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 District and/or a registered civil or structural engineer employed by the District or Architect, a detailed plan, stamped by a licensed engineer retained by the Contractor, 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

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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 District or by the person to whom authority to accept has been delegated by the District.

12.3 No Tort Liability of District

Pursuant to Labor Code section 6705, nothing in this Article shall impose tort liability upon the District 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 section 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 District, in writing, of any:
 - **12.5.1.1** Material that the Contractor believes may be material that is hazardous waste, as defined in section 25117 of the Health and Safety Code, 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 District 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 District 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 by 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 pertain to the resolution of disputes and protests.

13. INSURANCE AND BONDS

13.1 <u>Insurance</u>

Unless different provisions and/or limits are indicated in the Special Conditions, all insurance required of Contractor and/or its Subcontractor(s) shall be at least as broad as the amounts and include the provisions set forth herein.

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, District, State, Construction Manager(s), Project Inspector(s), and Architect(s) from all claims for bodily injury, property damage, personal injury, death, advertising injury, and medical payments arising from, or in connection with, operations under this Contract. This coverage shall be provided in a form at least as broad as Insurance Services (ISO) Form CG 0001 11188. Contractor shall ensure that Products Liability and Completed Operations coverage, Fire Damage Liability coverage, and Automobile Liability Insurance coverage including owned, non-owned, and hired automobiles, are included within the above policies and at the required limits, or Contractor shall procure and maintain these coverages separately.
- **13.1.1.2** Contractor's deductible or self-insured retention for its Commercial General Liability Insurance policy shall not exceed \$25,000 unless approved in writing by District.
- **13.1.1.3** All such policies shall be written on an occurrence form.

13.1.2 Excess Liability Insurance

- **13.1.2.1** If Contractor's underlying policy limits are less than required, subject to the District's sole discretion, Contractor may procure and maintain, during the life of this Contract, an Excess Liability Insurance Policy to meet the policy limit requirements of the required policies in order to satisfy, in the aggregate with its underlying policy, the insurance requirements herein.
- **13.1.2.2** There shall be no gap between the per occurrence amount of any underlying policy and the start of the coverage under the Excess Liability Insurance Policy. Any Excess Liability Insurance Policy shall be written on a following form and shall protect Contractor, District, State, Construction Manager(s), Project Manager(s), and Architect(s) in amounts and including the provisions as set forth in the Supplementary Conditions (if any) and/or Special Conditions, and that complies with all requirements for Commercial General Liability and Automobile Liability and Employers' Liability Insurance.
- **13.1.2.3** The District, in its sole discretion, may accept an Excess Liability Insurance Policy that brings Contractor's primary limits to the minimum requirements herein.
- **13.1.3** <u>Subcontractor(s):</u> Contractor shall require its Subcontractor(s), if any, to procure and maintain Commercial General Liability Insurance, Automobile Liability

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Insurance, and Excess Liability Insurance (if Subcontractor elects to satisfy, in part the insurance required herein by procuring and maintaining an Excess Liability Insurance Policy) with forms of coverage and limits equal to the amounts required of the Contractor.

13.1.4 Workers' Compensation and Employers' Liability Insurance

- **13.1.4.1** In accordance with provisions of section 3700 of the California Labor Code, the Contractor and every Subcontractor shall be required to secure the payment of compensation to its employees.
- **13.1.4.2** 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(s), if any, to procure and maintain Workers' Compensation Insurance and Employers' Liability Insurance for all employees of Subcontractor(s). 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 employee engaged in Work under this Contract, on or at the Site of the Project, is not protected under the Workers' Compensation Insurance, Contractor shall provide, or shall cause a Subcontractor to provide, adequate insurance coverage for the protection of any employee(s) not otherwise protected before any of those employee(s) commence work.

13.1.5 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 District, 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, theft, sonic disturbance, earthquake, flood, collapse, wind, rain, dust, 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.

13.1.6 Pollution Liability Insurance

13.1.6.1 Contractor shall procure and maintain Pollution Liability Insurance that shall protect Contractor, District, State, Construction Manager(s), Project Inspector(s), and Architect(s) from all claims for bodily injury, property damage, including natural resource damage, cleanup costs, removal, storage, disposal, and/or use of the pollutant arising from operations under this Contract, and defense, including costs and expenses incurred in the investigation, defense, or

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settlement of claims. Coverage shall apply to sudden and/or gradual pollution conditions resulting from the escape or release of smoke, vapors, fumes, acids, alkalis, toxic chemicals, liquids, or gases, natural gas, waste materials, or other irritants, contaminants, or pollutants, including asbestos. This coverage shall be provided in a form at least as broad as Insurance Services Offices, Inc. (ISO) Form CG 2415, or Contractor shall procure and maintain these coverages separately.

- **13.1.6.2** Contractor warrants that any retroactive date applicable to coverage under the policy shall predate the effective date of the Contract and that continuous coverage will be maintained or an extended reporting or discovery period will be exercised for a period of three (3) years, beginning from the time that the Work under the Contract is completed.
- **13.1.6.3** If Contractor is responsible for removing any pollutants from a site, then Contractor shall ensure that Any Auto, including owned, non-owned, and hired, is included within the above policies and at the required limits, to cover its automobile exposure from transporting the pollutants from the site to an approved disposal site. This coverage shall include the Motor Carrier Act Endorsement, MCS 90.

13.1.7 **Proof of Insurance and Other Requirements: Endorsements and** Certificates

- **13.1.7.1** Contractor shall not commence Work nor shall it allow any Subcontractor to commence Work under this Contract, until Contractor and its Subcontractor(s) have procured all required insurance and Contractor has delivered in duplicate to the District complete endorsements (or entire insurance policies) and certificates indicating the required coverages have been obtained, and the District has approved these documents.
- 13.1.7.2 Endorsements, certificates, and insurance policies shall include the following:
 - 13.1.7.2.1 A clause stating the following, or other language acceptable to the District:

"This policy shall not be canceled until written notice to District, Architect, and Construction Manager stating date of the cancellation by the insurance carrier. Date of cancellation may not be less than thirty (30) days after date of mailing notice."

- 13.1.7.2.2 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.
- 13.1.7.2.3 All endorsements, certificates and insurance policies shall state that District, its trustees, employees and agents, the State of California, Construction Manager(s), Project Manager(s), Inspector(s) and Architect(s) are named additional insureds under all policies except Workers' Compensation Insurance and Employers' Liability Insurance.

- All endorsements shall waive any right to subrogation against any of the named additional insureds.
- Contractor's and Subcontractors' insurance policy(s) shall be primary and non-contributory to any insurance or self-insurance maintained by District, its trustees, employees and/or agents, the State of California, Construction Manager(s), Project Manager(s), Inspector(s), and/or Architect(s).
- 13.1.7.2.6 Contractor's insurance limit shall apply separately to each insured against whom a claim is made or suit is brought.
- 13.1.7.3 No policy shall be amended, canceled or modified, and the coverage amounts shall not be reduced, until Contractor or Contractor's broker has provided written notice to District, Architect(s), and Construction Manager(s) stating date of the amendment, modification, cancellation or reduction, and a description of the change. Date of amendment, modification, cancellation or reduction may not be less than thirty (30) days after date of mailing notice.
- 13.1.7.4 Insurance written on a "claims made" basis shall be retroactive to a date that coincides with or precedes Contractor's commencement of Work, including subsequent policies purchased as renewals or replacements. Said policy is to be renewed by the Contractor and all Subcontractors for a period of five (5) years following completion of the Work or termination of this Agreement. Such insurance must have the same coverage and limits as the policy that was in effect during the term of this Agreement, and will cover the Contractor and all Subcontractors for all claims made.
- **13.1.7.5** Unless otherwise stated in the Special Conditions, all of Contractor's insurance shall be with insurance companies with an A.M. Best rating of no less than A: VII.
- **13.1.7.6** The insurance requirements set forth herein shall in no way limit the Contractor's liability arising out of or relating to the performance of the Work or related activities.
- 13.1.7.7 Failure of Contractor and/or its Subcontractor(s) to comply with the insurance requirements herein shall be deemed a material breach of the Contract.

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13.1.8 <u>Insurance Policy Limits</u>

13.1.8.1 Unless different limits are indicated in the Special Conditions, the limits of insurance shall not be less than the following amounts:

Commercial General Liability	Product Liability and Completed Operations, Fire Damage Liability – Split Limit	\$2,000,000 per occurrence; \$4,000,000 aggregate
Automobile Liability – Any Auto	Combined Single Limit	\$1,000,000
Workers' Compensation		Statutory limits pursuant to State law
Employers' Liability		\$1,000,000
Builder's Risk (Course of Construction)		Issued for the value and scope of Work indicated herein.
Pollution Liability		\$1,000,000 per claim; \$2,000,000 aggregate

13.1.8.2 If Contractor normally carries insurance in an amount greater than the minimum amounts required by District, that greater amount shall become the minimum required amount of insurance for purposes of the Contract. Therefore, Contractor hereby acknowledges and agrees that all insurance carried by it shall be deemed liability coverage for all actions it performs in connection with the Contract.

13.2 <u>Contract Security - Bonds</u>

- **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.

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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 <u>Warranty/Guarantee</u>

- **14.1.1** The Contractor shall obtain and preserve for the benefit of the District, 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 **ONE (1)** year after the later of the following dates, unless a longer period is provided for in the Contract Documents:
 - **14.1.2.1** The acceptance by the District's governing board of the Work, subject to these General Conditions, or
 - **14.1.2.2** The date that commissioning for the Project, if any, was completed.

At the District'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 a **ONE (1)** year period from date of completion as defined above, unless a longer period is provided for in the Contract Documents, without expense whatsoever to District. 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, Contractor and Surety hereby acknowledge and agree that District is authorized to proceed to have defects repaired and made good at expense of Contractor and/or Surety who hereby agree to pay costs and charges therefore immediately on demand.

- **14.1.3** If, in the opinion of District, defective work creates a dangerous condition or requires immediate correction or attention to prevent further loss to District or to prevent interruption of District operations, District will attempt to give the notice required above. If Contractor or Surety cannot be contacted or neither complies with District's request for correction within a reasonable time as determined by District, District may, notwithstanding the above provision, proceed to make any and all corrections and/or provide attentions the District 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.
- **14.1.4** 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 District all appropriate guarantee or warranty certificates as indicated in the Specifications or upon request by District.
- **14.1.5** Nothing herein shall limit any other rights or remedies available to District.

14.2 <u>Indemnity and Defense</u>

14.2.1 To the furthest extent permitted by California law, the Contractor shall indemnify, keep and hold harmless the District, the Architect(s), and the Construction Manager(s), their respective consultants, separate contractors, board members, officers, representatives, agents, and employees, in both individual and official capacities ("Indemnitees"), against all suits, claims, injury, damages, losses, and expenses ("Claims"), including but not limited to attorney's fees, caused by, arising out of, resulting from, or incidental to, in whole or in part, the performance of the Work under this Contract by the Contractor, its Subcontractors, vendors, or suppliers. However, the Contractor's indemnification and hold harmless obligation shall be reduced by the proportion of the Indemnitees' and/or Architect's liability to the extent the Claim(s) is/are caused by the sole negligence, active negligence, or willful misconduct of the Indemnitees, and/or defects in design furnished by the Architect, as found by a court or arbitrator of competent jurisdiction. This indemnification and hold harmless obligation of the Contractor shall not be construed to negate, abridge, or otherwise reduce any right or obligation of indemnity that would otherwise exist or arise as to Indemnitee or other person described herein. This indemnification and hold harmless obligation includes, but is not limited to, any failure or alleged failure by Contractor to comply with any provision of law, any failure or alleged failure to timely and properly fulfill all of its obligations under the Contract Documents in strict accordance with their terms, and without limitation, any failure or alleged failure of Contractor's obligations regarding any stop payment notice actions or liens, including Civil Wage and Penalty Assessments and/or Orders by the DIR.

To the furthest extent permitted by California law, Contractor shall also 14.2.2 defend Indemnitees, at its own expense, including but not limited to attorneys' fees and costs, against all Claims caused by, arising out of, resulting from, or incidental to, in whole or in part, the performance of the Work under this Contract by the Contractor, its Subcontractors, vendors, or suppliers. However, without impacting Contractor's obligation to provide an immediate and ongoing defense of Indemnitees, the Contractor's defense obligation shall be retroactively reduced by the proportion of the Indemnitees' and/or Architect's liability to the extent caused by the sole negligence, active negligence, or willful misconduct of the Indemnitees, and/or defects in design furnished by the Architect, as found by a court or arbitrator of competent jurisdiction. The District shall have the right to accept or reject any legal representation that Contractor proposes to defend the Indemnitees. If any Indemnitee provides its own defense due to failure to timely respond to tender of defense, rejection of tender of defense, or conflict of interest of proposed counsel, Contractor shall reimburse such Indemnitee for any expenditures. Contractor's defense obligation shall not be construed to negate, abridge, or otherwise reduce any right or obligation of defense that would otherwise exist as to any Indemnitee or other person described herein. Contractor's defense obligation includes, but is not limited to, any failure or alleged failure by Contractor to comply with any provision of law, any failure or alleged failure to timely and properly fulfill all of its obligations under the Contract Documents in strict accordance with their terms, and without limitation, any failure or alleged failure of Contractor's obligations regarding any stop payment notice actions or liens, including Civil Wage and Penalty Assessments and/or Orders by the DIR. The Contractor shall give prompt notice to the District in the event of any Claim(s).

14.2.3 Without limitation of the provisions herein, if the Contractor's obligation to indemnify and hold harmless the Indemnitees or its obligation to defend Indemnitees as provided herein shall be determined to be void or unenforceable, in whole or in part, 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, as provided herein. Further, the Contractor shall be and remain fully liable on its agreements and obligations herein to the fullest extent permitted by law.

- **14.2.4** Pursuant to Public Contract Code section 9201, the District shall provide timely notification to Contractor of the receipt of any third-party claim relating to this Contract. The District shall be entitled to recover its reasonable costs incurred in providing said notification.
- **14.2.5** 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 herein 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.
- **14.2.6** The District may retain so much of the moneys due the Contractor as shall be considered necessary, until disposition of any such Claims or until the District, Architect(s) and Construction Manager(s) have received written agreement from the Contractor that they will unconditionally defend the District, Architect(s) and Construction Manager(s), their respective officers, agents and employees, and pay any damages due by reason of settlement or judgment.
- **14.2.7** The Contractor's defense and indemnification obligations hereunder shall survive the completion of Work, the warranty/guarantee period, and the termination of the Contract.

15. TIME

15.1 Notice to Proceed

- **15.1.1** District 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 District desires to postpone issuing the Notice to Proceed beyond ninety (90) days from the date of the Notice of Award, it is expressly understood that with reasonable notice to the Contractor, the District 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 District

within ten (10) days after receipt by Contractor of District'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 District, the District 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, District 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 in compliance with the time extension request procedures and only if all of the following conditions are met:
 - **15.2.1.1** The weather conditions constitute Adverse Weather, as defined herein;
 - **15.2.1.2** Contractor can verify that the Adverse Weather caused delays in excess of five (5) hours of the indicated labor required to complete the scheduled tasks of Work on the day affected by the Adverse Weather;
 - **15.2.1.3** The Contractor's crew is dismissed as a result of the Adverse Weather;
 - **15.2.1.4** Said delay adversely affects the critical path in the Construction Schedule: and
 - **15.2.1.5** Exceeds twelve (12) days of delay per year.
- If the aforementioned conditions are met, a non-compensable day-for-day extension will only be allowed for those days in excess of those indicated herein.
- The Contractor shall work seven (7) days per week, if necessary, 15.2.3 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 District.
- 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 and competent work forces with the required levels of familiarity with the Project and skill, training and experience 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 District and approval of any required governmental agencies.

15.3.3 No Work during Testing

Contractor shall, at no additional cost to the District and at the District's request, coordinate its Work to not disturb District students including, without limitation, not performing any Work when students at the Site are taking tests. The District or District's Representative will provide Contractor with a schedule of test dates concurrent with the District's issuance of the Notice to Proceed, or as soon as test dates are made available to the District.

15.4 Progress and Completion

15.4.1 <u>Time of the Essence</u>

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 or Bonds

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 or bonds. 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 District claim for damages.

15.5 <u>Schedule</u>

Contractor shall provide to District, Construction Manager, and Architect a schedule in conformance with the Contract Documents and as required in the Notice to Proceed and the Contractor's Submittals and Schedules section of these General Conditions.

15.6 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 <u>Liquidated Damages</u>

Contractor and District 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 District will suffer damage. It being impractical and unfeasible to determine the amount of actual damage, it is agreed the Contractor shall pay to District 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. Contractor and its Surety shall be liable for the amount thereof pursuant to Government Code section 53069.85.

16.2 Excusable Delay

- **16.2.1** Contractor shall not be charged for liquidated damages because of any delays in completion of the Work which are not the fault of Contractor or its Subcontractors, including acts of God as defined in Public Contract Code section 7105, acts of enemy, epidemics, and quarantine restrictions. Contractor shall, within five (5) calendar days of beginning of any delay, notify District in writing of causes of delay including documentation and facts explaining the delay and the direct correlation between the cause and effect. District 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 District pursuant to the claims provisions in these General Conditions of any anticipated delay and its cause. Following submission of a claim, the District 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.
 - **16.2.3.1** 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. In particular, Contractor must show an actual impact to the schedule, after making a good faith effort to mitigate the delay by rescheduling the work, by providing an analysis of the schedule ("Time Impact Analysis"). Such Time Impact Analysis shall describe in detail the cause and effect of the delay and the impact on the critical dates in the Project schedule. (A portion of any delay of seven (7) days or more must be provided.)
 - **16.2.3.2** A recovery schedule must be submitted within twenty (20) calendar days of written notification to the District of causes of delay.

16.3 No Additional Compensation for Delays Within Contractor's Control

- **16.3.1** Contractor is aware that governmental agencies, including, without limitation, the Division of the State Architect, the Department of General Services, gas companies, electrical utility companies, water districts, 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 District is 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 the District and Contractor;
 - **16.3.2.4** The delay could not have been avoided or mitigated by Contractor's reasonable diligence; and
 - **16.3.2.5** Contractor timely complies with the claims procedure of the Contract Documents.
- **16.3.3** Where a change in the Work extends the Contract Time, Contractor may request and recover additional, actual direct costs, provided that Contractor can demonstrate such additional costs are:
 - **16.3.3.1** Actually incurred performing the Work;
 - **16.3.3.2** Not compensated by the Markup allowed; and
 - **16.3.3.3** Directly result from the extended Contract Time.

Contractor shall comply with all required procedures, documentation and time requirements in the Contract Documents. Contractor may not seek or recover such costs using formulas (e.g. Eichleay, labor factors).

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 District or the Contractor, but its use shall be determined solely by the District.

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 District as herein provided. District 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 District's governing board has authorized the same and the cost thereof has been approved in writing by Change Order or Construction Change Directive in advance of the changed Work being performed. 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 and approved in writing in the Change Order or Construction Change Directive. Contractor shall be responsible for any costs incurred by the District for professional services and DSA fees and/or delay to the Project Schedule, if any, for DSA to review any request for changes to the DSA approved plans and specifications for the convenience of the Contractor and/or to accommodate the Contractor's means and methods. 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 or extend the Contract Time, the cost of or length of extension in that Change Order shall be agreed to, in writing, by the District in advance of the Work by Contractor, and shall be subject to the monetary limitations set forth in Public Contract Code section 20118.4. In the event that Contractor proceeds with any change in Work without a Change Order executed by the District or Construction Change Directive, Contractor waives any claim of additional compensation or time for that additional work. Under no circumstances shall Contractor be entitled to any claim of additional compensation or time not expressly requested by Contractor in a Proposed Change Order or approved by District in an executed Change Order.
- **17.1.4** A Change Order or Construction Change Directive will become effective when approved by the Board, notwithstanding that Contractor has not signed it. A Change Order or Construction Change Directive will become effective without Contractor's signature provided District indicates it as a "Unilateral Change Order". Any dispute as to the adjustment in the Contract Price or Contract Time, if any, of the Unilateral Change Order shall be resolved pursuant to the Payment and Claims and Disputes provisions herein.
- **17.1.5** Contractor understands, acknowledges, and agrees that the reason for District authorization is so that District may have an opportunity to analyze the Work and decide whether the District shall proceed with the Change Order or alter the Project so that a change in Work becomes unnecessary.

17.2 **Architect Authority**

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, by Architect's response(s) to RFI(s), or by Architect's Supplemental Instructions ("ASI").

17.3 Change Orders

- **17.3.1** A Change Order is a written instrument prepared and issued by the District and/or the Architect and signed by the District (as authorized by the District's Governing Board), the Contractor, the Architect, and approved by the Project Inspector (if necessary) and DSA (if necessary), 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 District, the Construction Manager, and/or the Architect and signed by the District and the Architect, directing a change in the Work. The District 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. The adjustment to the Contract Price or Time, if any, is subject to the provisions of this section regarding Changes in the Work. If all or a portion of the Project is being funded by funds requiring approval by the State Allocation Board ("SAB"), these revisions may be subject to compensation once approval of same is received and funded by the SAB, and funds are released by the Office of Public School Construction ("OPSC"). Any dispute as to the adjustment in the Contract Price, if any, 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 District 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 District and compensation will be determined as set forth herein.
- **17.5.2** The District 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 District.

- **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 District will only pay for actual costs verified in the field by the District or its authorized representative(s) 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, and Contractor shall not be entitled to separately recover additional amounts for overhead and/or profit.
- **17.5.5** The Contractor shall notify the District or its authorized representative(s) at least twenty-four (24) hours prior to proceeding with any of the force account work. Furthermore, the Contractor shall notify the District when it has consumed eighty percent (80%) of the budget, and shall not exceed the budget unless specifically authorized in writing by the District. The Contractor will not be compensated for force account work in the event that the Contractor fails to timely notify the District 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 using Document 00 63 47, "Daily Force Account Report," 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 on the daily force account reports. The type and model of equipment shall be identified and listed. The District will review the information contained in the reports, and sign the reports no later than the next work day, and return a copy of the report to the Contractor for their records. The District will not sign, nor will the Contractor receive compensation for work the District 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 District 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 District 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

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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 District 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 and backup documentation pursuant to the revisions herein and sufficient, in the District's judgment, to validate any change in Contract Price. In no case shall Contractor or any of its Subcontractors be permitted to reserve rights for additional compensation for Change Order Work.

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. The Contractor shall justify the proposed change in time by submittal of a schedule analysis that accurately shows the impact of the change on the critical path of the Construction Schedule ("Time Impact Analysis"). If Contractor fails to request a time extension in a PCO, including the Time Impact Analysis then the Contractor is thereafter precluded from requesting, and waives any right to request, additional time and/or claim a delay. In no case shall Contractor or any of its Subcontractors be permitted to reserve rights for additional time for Change Order Work. A PCO that leaves the amount of time requested blank, or states that such time requested is "to be determined", is not permitted and shall also constitute a waiver of any right to request additional time and/or claim a delay.

17.7.4 Unknown and/or Unforeseen Conditions

If there is an Allowance, then Contractor must submit a Request for Allowance Expenditure Directive, including supporting documentation as described below, to receive authorization for the release of funds from the Allowance. Allowance Expenditure Directives shall be based on Contractor's costs, without overhead and profit, for products, delivery, installation, labor, insurance, payroll, taxes, bonding and equipment rental will be included in Allowance Expenditure Directive authorizing expenditure of funds from this Allowance. No overhead and profit shall be added to the Allowance Expenditure Directive. If cost of the unforeseen condition(s) exceed the Allowance, Contractor must submit a PCO for amounts in excess of the Allowance 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(s) on the Project, then Contractor shall base the PCO on provable information that, beyond a reasonable doubt and to the District's satisfaction, demonstrates that the unknown and/or unforeseen condition(s) were actually unknown and/or unforeseen and that the condition(s) were reasonably unknown and/or unforeseen. If not, the District shall deny the PCO as unsubstantiated, and the Contractor shall complete the Project without any increase in Contract Price and/or Contract Time based on that PCO.

17.7.5 Time to Submit Proposed Change Order

Contractor shall submit its PCO within five (5) working days of the date Contractor discovers, or reasonably should have discovered, the circumstances giving rise to the PCO, unless additional time to submit a PCO is granted in writing by the District. Time is of the essence in Contractor's submission of PCOs so that the District can promptly investigate the basis for the PCO. Accordingly, if Contractor fails to submit its PCO within this timeframe, Contractor waives, releases, and discharges any right to assert or claim any entitlement to an adjustment of the Contract Price and/or Time based on circumstances giving rise to the PCO

17.7.6 Proposed Change Order Certification

In submitting a PCO, Contractor certifies and affirms that the cost and/or time request is submitted in good faith, that the cost and/or time request is accurate and in accordance with the provisions of the Contract Documents, and the Contractor submits the cost and/or request for extension of time recognizing the significant civil penalties and treble damages which follow from making a false claim or presenting a false claim under Government Code section 12650 et seq.

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, direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project including, without limitation, cumulative impacts. Contractor is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.

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17.8 Format for Proposed Change Order

17.8.1 The following format shall be used as applicable by the District and the Contractor (e.g. Change Orders, PCO's) to communicate proposed additions and deductions to the Contract, supported by attached documentation. Any spaces left blank will be deemed no change to cost or time.

	WORK PERFORMED OTHER THAN BY CONTRACTOR	ADD	<u>DEDUCT</u>
(a)	Material (attach suppliers' invoice or itemized quantity		
	and unit cost plus sales tax)		
(b)	Add Labor (attach itemized hours and rates, fully		
	Burdened, and specify the hourly rate for each additional		
	labor burden, for example, payroll taxes, fringe benefits,		
	etc.)		
(c)	Add Equipment (attach suppliers' invoice)		
(d)	<u>Subtotal</u>		
(e)	Add overhead and profit for any and all tiers of		
	Subcontractor , the total not to exceed ten percent		
	(10%) of Item (d)		
(f)	<u>Subtotal</u>		
(g)	Add General Conditions Cost (if Time is Compensable)		
	(attach supporting documentation)		
(h)	<u>Subtotal</u>		
(i)	Add Overhead and Profit for Contractor, not to		
	exceed five percent (5%) of Item (h)		
(j)	Subtotal		
(k)	Add Bond and Insurance, not to exceed two percent		
	(2%) of Item (j)		
(1)	TOTAL		
(m)	<u>Time</u> (zero unless indicated; "TBD" not permitted)	Calendar Days	

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	WORK PERFORMED BY CONTRACTOR	ADD	DEDUCT
(a)	<u>Material</u> (attach itemized quantity and unit cost plus sales tax)		
(b)	Add Labor (attach itemized hours and rates, fully Burdened, and specify the hourly rate for each additional labor burden, for example, payroll taxes, fringe benefits, etc.)		
(c)	Add Equipment (attach suppliers' invoice)		
(d)	Add General Conditions Cost (if Time is Compensable) (attach supporting documentation)		
(e)	Subtotal		
(f)	Add Overhead and Profit for Contractor, not to exceed fifteen percent (15%) of Item (e)		
(g)	Subtotal		
(h)	Add Bond and Insurance, not to exceed two percent (2%) of Item (g)		
(i)	TOTAL		
(j)	Time (zero unless indicated; "TBD" not permitted)	Calendar Days	

- **Labor**. Contractor shall be compensated for the costs of labor actually and directly utilized in the performance of the Work. Such labor costs shall be the actual cost, use of any formulas (e.g., labor factors) is not allowed, not to exceed prevailing wage rates in the locality of the Site and shall be in the labor classification(s) necessary for the performance of the Work, fully Burdened. Labor costs shall exclude costs incurred by the Contractor in preparing estimate(s) of the costs of the change in the Work, in the maintenance of records relating to the costs of the change in the Work, coordination and assembly of materials and information relating to the change in the Work or performance thereof, or the supervision and other overhead and general conditions costs associated with the change in the Work or performance thereof, including but not limited to the cost for the job superintendent. If applicable, District will pay Contractor the reasonable costs for room and board, supported with appropriate backup documentation, without markup for profit or overhead as provided by U.S. General Services Administration per diem rates for California lodging, meals and incidentals, https://www.gsa.gov/travel/planbook/per-diem-rates/per-diem-rates-lookup.
- Materials. Contractor shall be compensated for the costs of materials necessarily and actually used or consumed in connection with the performance of the change in the Work. Costs of materials may include reasonable costs of transportation from a source closest to the Site of the Work and delivery to the Site. If discounts by material suppliers are available for materials necessarily used in the performance of the change in the Work, they shall be credited to the District. If materials necessarily used in the performance of the change in the Work are obtained from a supplier or source owned in whole or in part by the Contractor, compensation therefor shall not exceed the current wholesale price for such materials. If, in the reasonable opinion of the District, the costs asserted by the Contractor for materials in connection with any change in the Work are excessive, or if the Contractor fails to provide satisfactory evidence of the actual costs of such materials from its supplier or vendor of the same, the costs of such materials and the District's obligation to pay for the same shall be limited to the then lowest wholesale

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price at which similar materials are available in the quantities required to perform the change in the Work. The District may elect to furnish materials for the change in the Work, in which event the Contractor shall not be compensated for the costs of furnishing such materials or any mark-up thereon.

- **Equipment**. As a precondition for the District's duty to pay for Equipment rental or loading and transportation, Contractor shall provide satisfactory evidence of the actual costs of Equipment from the supplier, vendor or rental agency of same. Contractor shall be compensated for the actual cost of the necessary and direct use of Equipment in the performance of the change in the Work. Use of such Equipment in the performance of the change in the Work shall be compensated in increments of fifteen (15) minutes. Rental time for Equipment moved by its own power shall include time required to move such Equipment to the site of the Work from the nearest available rental source of the same. If Equipment is not moved to the Site by its own power, Contractor will be compensated for the loading and transportation costs in lieu of rental time. The foregoing notwithstanding, neither moving time or loading and transportation time shall be allowed if the Equipment is used for performance of any portion of the Work other than the change in the Work. Unless prior approval in writing is obtained by the Contractor from the Architect, the Project Inspector and the District, no costs or compensation shall be allowed for time while Construction Equipment is inoperative, idle or on standby, for any reason. Contractor shall not be entitled to an allowance or any other compensation for Equipment or tools used in the performance of change in the Work where such Equipment or tools have a replacement value of \$500.00 or less. Equipment costs claimed by the Contractor in connection with the performance of any Work shall not exceed rental rates established by distributors or construction equipment rental agencies in the locality of the Site; any costs asserted which exceed such rental rates shall not be allowed or paid. Unless otherwise specifically approved in writing by the Architect, the Project Inspector and the District, the allowable rate for the use of Equipment in connection with the Work shall constitute full compensation to the Contractor for the cost of rental, fuel, power, oil, lubrication, supplies, necessary attachments, repairs or maintenance of any kind, depreciation, storage, insurance, labor (exclusive of labor costs of the Equipment operator), and any and all other costs incurred by the Contractor incidental to the use of such Equipment.
- 17.8.5 General Conditions Cost. The phrase "General Conditions Cost" shall mean, other than expressly limited or excluded herein, the costs of Contractor during the construction phase, including but not limited to: payroll costs for project manager for Work conducted at the Site, payroll costs for the superintendent and full-time general foremen, workers not included as direct labor costs engaged in support functions (e.g., loading/unloading, clean-up), costs of offices and temporary facilities including office materials, office supplies, office equipment, minor expenses, utilities, fuel, sanitary facilities and telephone services at the Site, costs of consultants not in the direct employ of Contractor or Subcontractors, and fees for permits and licenses.
- **17.8.6 Overhead and Profit**. The phrase "Overhead and Profit" shall include field and office supervisors and assistants, watchperson, use of small tools, consumable, insurance other than construction bonds and insurance required herein, general conditions costs and home office expenses.

17.9 Change Order Certification

- **17.9.1** All Change Orders and PCOs include the following certification by the Contractor, either in the form specifically or incorporated by this reference:
 - **17.9.1.1** The undersigned Contractor approves the foregoing as to the changes, if any, to 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 section 12650 et seq. It is understood that the changes herein to the Contract shall only be effective when approved by the governing board of the District.
 - **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, direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project including, without limitation, cumulative impacts. Contractor is not entitled to separately recover amounts for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.
- **17.9.2** Accord and Satisfaction: Contractor's execution of any Change Order shall constitute a full accord and satisfaction, and release, of all Contractor (and if applicable, Subcontractor) claims for additional time, money or other relief arising from or relating to the subject matter of the change including, without limitation, impacts of all types, cumulative impacts, inefficiency, overtime, delay and any other type of claim.

17.10 <u>Determination of Change Order Cost</u>

- **17.10.1** The amount of the increase or decrease in the Contract Price from a Change Order, if any, shall be determined in one or more of the following ways as applicable to a specific situation and at the District's discretion:
 - **17.10.1.1** District acceptance of a PCO;
 - **17.10.1.2** By unit prices contained in Contractor's original bid;
 - **17.10.1.3** By agreement between District and Contractor.

17.11 <u>Deductive Change Orders</u>

All deductive Change Order(s) must be prepared pursuant to the provisions herein. Where a portion of the Work is deleted from the Contract, the reasonable value of the deducted work less the value of work performed shall be considered the appropriate deduction. The value submitted on the Schedule of Values shall be used to calculate the credit amount unless the bid documentation is being held in escrow as part of the Contract Documents. Unit Prices, if any, may be used in District's discretion in calculating reasonable value. If Contractor offers a proposed amount for a deductive

Change Order(s), 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(s). 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.

17.12 Addition or Deletion of Alternate Bid Item(s)

If the Bid Form and Proposal includes proposal(s) for Alternate Bid Item(s), during Contractor's performance of the Work, the District may elect to add or delete any such Alternate Bid Item(s) if not included in the Contract at the time of award. If the District elects to add or delete Alternate Bid Item(s) after Contract award, the cost or credit for such Alternate Bid Item(s) shall be as set forth in the Bid Form and Proposal unless the parties agree to a different price and the Contract Time shall be adjusted by the number of days allocated in the Contract Documents. If days are not allocated in the Contract Documents, the Contract Time shall be equitably adjusted.

17.13 <u>Discounts, Rebates, and Refunds</u>

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 of 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 District, including, without limitation, Job Cost Reports as provided in these General Conditions, which shall be available to the District on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents. Such records shall include without limitation hourly records for Labor and Equipment and itemized records of materials and Equipment used that day in connection with the performance of any Work. All records maintained hereunder shall be subject to inspection, review and/or reproduction by the District, the Architect or the Project Inspector upon request. In the event that the Contractor fails or refuses, for any reason, to maintain or make available for inspection, review and/or reproduction such records, the District's reasonable good faith determination of the extent of adjustment to the Contract Price shall be final, conclusive, dispositive and binding upon Contractor.

17.15 Notice Required

If the Contractor desires to make a claim for an increase in the Contract Price, or any extension in the Contract Time for completion, it shall notify the District pursuant to the provisions herein, including the Article on Claims and Disputes. 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. Change Orders altered in violation of this provision, if in conflict with the terms set forth herein, shall be construed in accordance with the terms set forth herein. 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** 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. Upon request by the District, Contractor shall provide an electronic copy of the Request for Information in addition to the hard copy.
- **18.2** The Contractor shall be responsible for any costs incurred for professional services that District 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. District, 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 District to the Contractor for performance of the Work under the Contract Documents.

19.2 Applications for Progress Payments

19.2.1 <u>Procedure for Applications for Progress Payments</u>

19.2.1.1 Application for Progress Payment

- **19.2.1.1.1** Not before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the District and the Architect an itemized Application for Payment for operations completed in accordance with the Schedule of Values. Such application shall be notarized, if required, and supported by the following or each portion thereof unless waived by the District in writing:
 - **19.2.1.1.1.1** 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;
 - **19.2.1.1.1.2** 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 said payment is made;
 - **19.2.1.1.4** A certification that the As-Builts and annotated Specifications are current;
 - **19.2.1.1.1.5** Itemized breakdown of work done for the purpose of requesting partial payment;
 - **19.2.1.1.1.6** An updated and acceptable construction schedule in conformance with the provisions herein;
 - **19.2.1.1.7** The additions to and subtractions from the Contract Price and Contract Time;
 - **19.2.1.1.1.8** A total of the retentions held:
 - **19.2.1.1.1.9** Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;
 - **19.2.1.1.10** The percentage of completion of the Contractor's Work by line item;
 - **19.2.1.1.111** 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 section 8132

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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 section 8134 from the Contractor and each subcontractor of any tier and supplier that was paid from the previous progress payment(s); and
- **19.2.1.1.1.14** A certification by the Contractor of the following:

The Contractor warrants title to all Work performed as of the date of this payment application has been completed in accordance with the Contract Documents for the Project. The Contractor further warrants that all amounts have been paid for work which previous Certificates for Payment were issued and payments received and 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 District has been informed. 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 section 12650 et seq.

- **19.2.1.1.15** The Contractor shall be subject to the False Claims Act set forth in Government Code section 12650 et seq. for information provided with any Application for Progress Payment.
- **19.2.1.1.1.16** All remaining certified payroll records ("CPR(s)") for each journeyman, apprentice, worker, or other employee employed by the Contractor and/or each Subcontractor in connection with the Work for the period of the Application for Payment. As indicated herein, the District shall not make any payment to Contractor until:
 - **19.2.1.1.1.16.1** Contractor and/or its Subcontractor(s) provide electronic CPRs directly to the DIR on no less than every 30 days while Work is being performed and within 30 days after the final day of Work performed on the Project for any journeyman, apprentice, worker or other employee was employed in connection with the Work, or within ten (10) days of any request by the District or the DIR to the requesting entity, and
 - **19.2.1.1.16.2** Any delay in Contractor and/or its Subcontractor(s) providing CPRs in a timely manner may directly delay the Contractor's payment.
- **19.2.1.1.2** Applications received after June 20th will not be paid until the second week of July and applications received after December 12th will not be paid until the first week of January.

19.2.2 Prerequisites for Progress Payments

- **19.2.2.1** <u>First Payment Request</u>: The following items, if applicable, must be completed before the District will accept and/or process the Contractor's first payment request:
- **19.2.2.1.1** Installation of the Project sign;
- **19.2.2.1.2** Installation of field office; (Not Applicable)
- **19.2.2.1.3** Installation of temporary facilities and fencing;
- **19.2.2.1.4** Schedule of Values;
- **19.2.2.1.5** Contractor's Construction Schedule;
- **19.2.2.1.6** Schedule of unit prices, if applicable;
- 19.2.2.1.7 Submittal Schedule;
- **19.2.2.1.8** Receipt by Architect of all submittals due as of the date of the payment application;
- **19.2.2.1.9** Copies of necessary permits;
- **19.2.2.1.10** Copies of authorizations and licenses from governing authorities;
- 19.2.2.1.11 Initial progress report;
- **19.2.2.1.12** Surveyor qualifications;
- **19.2.2.1.13** Written acceptance of District's survey of rough grading, if applicable;
- **19.2.2.1.14** List of all Subcontractors, with names, license numbers, telephone numbers, and Scope of Work;
- **19.2.2.1.15** All bonds and insurance endorsements; and
- **19.2.2.1.16** Resumes of Contractor's project manager, and if applicable, job site secretary, record documents recorder, and job site superintendent.
- **19.2.2.2** <u>Second Payment Request</u>: The District will not process the second payment request until and unless all submittals and Shop Drawings have been accepted for review by the Architect.
- **19.2.2.3 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 District. Instead, such payment shall be construed as a good faith effort by District 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 <u>Progress Payments</u>

19.3.1 <u>District's Approval of Application for Payment</u>

- **19.3.1.1** Upon receipt of an Application for Payment, The District shall act in accordance with both of the following:
 - **19.3.1.1.1** Each Application for Payment shall be reviewed by the District 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) days, after receipt. An Application for Payment returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the Application for Payment is not proper. The number of days available to the District to make a payment without incurring interest pursuant to this section shall be reduced by the number of days by which the District 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 District.
- **19.3.1.2** The District's review of the Contractor's Application for Payment will be based on the District'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 District'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** District'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 Inspector and certified by Contractor) up to the last day of the previous month, less the aggregate of previous payments and amount to be withheld. 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 District's right to enforce each and every provision of this Contract, and the District 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 District concerning the Work, or any portion thereof, remains incomplete.
- **19.3.2.3** If the District fails to make any progress payment within thirty (30) days after receipt of an undisputed and properly submitted Application for Payment from the Contractor, the District shall pay interest to the Contractor equivalent to the legal rate set forth in subdivision (a) of Section 685.010 of the Code of Civil Procedure.

19.3.3 **No Waiver**

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

19.4 <u>Decisions to Withhold Payment</u>

19.4.1 Reasons to Withhold Payment

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

- **19.4.1.1** Defective Work not remedied within **FORTY-EIGHT (48)** hours of written notice to Contractor.
- **19.4.1.2** Stop Payment Notices or other liens served upon the District as a result of the Contract. Contractor agrees that the District may withhold up to 125% of the amount claimed in the Stop Payment Notice to answer the claim and to provide for the District's reasonable cost of any litigation pursuant to the stop payment notice.
- **19.4.1.3** Written notice from payment and/or performance bond surety(ies) to withhold payment from Contractor.

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- **19.4.1.4** Liquidated damages assessed against the Contractor.
- **19.4.1.5** The cost of completion of the Contract if there exists a reasonable doubt that the Work can be completed for the unpaid balance of the Contract Price or by the completion date.
- **19.4.1.6** Damage to the District or other contractor(s).
- **19.4.1.7** Unsatisfactory prosecution of the Work by the Contractor.
- **19.4.1.8** Failure to store and properly secure materials.
- **19.4.1.9** 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 verified reports.
- **19.4.1.10** Failure of the Contractor to maintain As-Builts.
- **19.4.1.11** Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment.
- **19.4.1.12** Unauthorized deviations from the Contract Documents.
- **19.4.1.13** 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.
- **19.4.1.14** Failure to provide acceptable electronic certified payroll records, as required by the Labor Code, by these Contract Documents, or by written request; for each journeyman, apprentice, worker, or other employee employed by the Contractor and/or by each Subcontractor in connection with the Work for the period of the Application for Payment or if payroll records are delinquent or inadequate.
- **19.4.1.15** Failure to properly pay prevailing wages as required in Labor Code section 1720 et seq., failure to comply with any other Labor Code requirements, and/or failure to comply with labor compliance monitoring and enforcement by the DIR.
- **19.4.1.16** Allowing an unregistered subcontractor, as described in Labor Code section 1725.5, to engage in the performance of any work under this Contract.
- **19.4.1.17** Failure to comply with any applicable federal statutes and regulations regarding minimum wages, withholding, payrolls and basic records, apprentice and trainee employment requirements, equal employment opportunity requirements, Copeland Act requirements, Davis-Bacon Act and related requirements, Contract Work Hours and Safety Standards Act requirements, if applicable.

- 19.4.1.18 Failure to properly maintain or clean up the Site.
- **19.4.1.19** Failure to timely indemnify, defend, or hold harmless the District.
- **19.4.1.20** Any payments due to the District, including but not limited to payments for failed tests, utilities changes, or permits.
- **19.4.1.21** Failure to pay Subcontractor(s) or supplier(s) as required by law and by the Contract Documents.
- **19.4.1.22** Failure to pay any royalty, license or similar fees.
- **19.4.1.23** Contractor is otherwise in breach, default, or in substantial violation of any provision of this Contract.
- **19.4.1.24** Failure to perform any implementation and/or monitoring required by any SWPPP for the Project and/or the imposition of any penalties or fines therefore whether imposed on the District or Contractor.

19.4.2 Reallocation of Withheld Amounts

- **19.4.2.1** District may, in its discretion, apply any withheld amount to pay outstanding claims or obligations as defined herein. In so doing, District shall make such payments on behalf of Contractor. If any payment is so made by District, then that amount shall be considered a payment made under Contract by District to Contractor and District 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. District 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, District may, after **FORTY-EIGHT (48)** hours' written notice to the Contractor and, without prejudice to any other remedy, make good such deficiencies. The District shall adjust the total Contract Price by reducing the amount thereof by the cost of making good such deficiencies. If District 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 fifty percent (150%) 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.

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19.5 <u>Subcontractor Payments</u>

19.5.1 Payments to Subcontractors

No later than seven (7) days after receipt, or pursuant to Business and Professions Code section 7108.5 and Public Contract Code section 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 District for Subcontractor Payment

The District 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

District shall have the right in its sole discretion, if necessary for the protection of the District, 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 District and a Subcontractor of any tier, or a material or equipment supplier, any obligation from the District to such Subcontractor or a material or equipment supplier against the District.

20. COMPLETION OF THE WORK

20.1 <u>Completion</u>

- **20.1.1** District will accept completion of Contract and have the Notice of Completion recorded when the entire Work shall have been completed to the satisfaction of District.
- **20.1.2** The Work may only be accepted as complete by action of the governing board of the District.
- **20.1.3** District, 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 District, except for minor corrective items, as distinguished from incomplete items. If Contractor fails to complete all minor corrective items within fifteen (15) days after the date of the District's acceptance of completion, District 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 District, until the item(s) are completed.
- **20.1.4** At the end of the 15-day period, if there are any items remaining to be corrected, District may elect to proceed as provided herein related to adjustments to Contract Price, and/or District's right to perform the Work of the Contractor.

20.2 <u>Close-Out/Certification Procedures</u>

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/Certification 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 and Record Specifications

- **20.2.2.1.** Contractor shall provide exact Record Drawings of the Work ("As-Builts") and Record Specifications upon completion of the Project and as a condition precedent to approval of final payment.
- **20.2.2.2.** Contractor shall obtain the Inspector's approval of the corrected prints and employ a competent draftsman to transfer the Record Drawings information to the most current version of AutoCAD that is, at that time, currently utilized for plan check submission by either the District, the Architect, OPSC, and/or DSA, and print a complete set of transparent sepias. When completed, Contractor shall deliver corrected sepias and diskette/CD/other
- **20.2.2.3** Contractor is liable and responsible for any and all inaccuracies in the Record Drawings and Record Specifications, even if inaccuracies become evident at a future date.

20.2.2.3 Construction Storm Water Permit, if applicable

Contractor shall submit to District all electronic or hard copy records required by the Construction Storm Water Permit, if applicable, within seven (7) days of Completion of the Project.

- **20.2.2.4** <u>Maintenance Manuals</u>: Contractor shall prepare all operation and maintenance manuals and date as indicated in the Specifications.
- **20.2.2.5** <u>Source Programming</u>: Contractor shall provide all source programming for all items in the Project.
- **20.2.2.6** <u>Verified Reports</u>: Contractor shall completely and accurately fill out and file forms DSA 6-C or DSA 152 (or current form), as appropriate. Refer to

section 4-336 and section 4-343 of Part 1, Title 24 of the California Code of Regulations.

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 without District's prior written approval. 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 District acceptance, Architect and Project Inspector will inspect the Work and shall submit to Contractor and District 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 District 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 District its final Application for Payment.

20.3.3 Final Inspection Requirements

- **20.3.3.1** Before calling for final inspection, Contractor shall determine that the following have been performed:
 - **20.3.3.1.1** The Work has been completed.
 - **20.3.3.1.2** All life safety items are completed and in working order.
 - **20.3.3.1.3** Mechanical and electrical Work including, without limitation, security system, data, and fire alarm, are complete and tested, fixtures are in place, connected, and ready for tryout.
 - **20.3.3.1.4** Electrical circuits scheduled in panels and disconnect switches labeled.
 - **20.3.3.1.5** Painting and special finishes complete.
 - **20.3.3.1.6** Doors complete with hardware, cleaned of protective film, relieved of sticking or binding, and in working order.
 - **20.3.3.1.7** Tops and bottoms of doors sealed.
 - **20.3.3.1.8** Floors waxed and polished as specified.
 - **20.3.3.1.9** Broken glass replaced and glass cleaned.

20.3.3.1.10 Grounds cleared of Contractor's equipment, raked clean of debris, and trash removed from Site.

- **20.3.3.1.11** Work cleaned, free of stains, scratches, and other foreign matter, and damaged and broken material replaced.
- **20.3.3.1.12** Finished and decorative work shall have marks, dirt, and superfluous labels removed.
- **20.3.3.1.13** Final cleanup, as provided herein.

20.4 Costs of Multiple Inspections

More than two (2) requests of the District to make a final inspection shall be considered an additional service of District, Architect, Construction Manager, and/or Project Inspector, 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 <u>District's Rights to Occupancy</u>

The District may occupy or use any completed or partially completed portion of the Work at any stage, and such occupancy shall not constitute the District's Final Acceptance of any part of the Work. Neither the District'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 District 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. In the event that the District occupies or uses any completed or partially completed portion of the Work, the Contractor shall remain responsible 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 unless the Contractor requests in writing, and the District agrees, to otherwise divide those responsibilities. 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 District 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 District, 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 District's 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 District 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 District's acceptance of the Work of the Contractor as fully complete by the Governing Board of the District (that, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District shall record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of final payment from the District, pay the amount due Subcontractors.

21.2 <u>Prerequisites for Final Payment</u>

The following conditions must be fulfilled prior to Final Payment:

- **21.2.1** A full release of all Stop Payment Notices served in connection with the Work shall be submitted by Contractor.
- **21.2.2** A duly completed and executed conditional waiver and release upon final payment compliant with Civil Code section 8136, from the Contractor and each subcontractor of any tier and supplier to be paid from the final payment.
- **21.2.3** A duly completed and executed unconditional waiver and release upon progress payment compliant with Civil Code section 8134, from the Contractor and each subcontractor of any tier and supplier that was paid from the previous progress payments.
- **21.2.4** A duly completed and executed Document 00 65 19.26, "AGREEMENT AND RELEASE OF ANY AND ALL CLAIMS" from the Contractor.
- **21.2.5** 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 District required under the Contract Documents.
- **21.2.6** 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.
- **21.2.7** Contractor must have completed all requirements set forth under "Close-Out/Certification Procedures," including, without limitation, submission of an approved set of complete Record Drawings.
- **21.2.8** Architect shall have issued its written approval that final payment can be made.
- **21.2.9** The Contractor shall have delivered to the District all manuals and materials required by the Contract Documents, which must be approved by the District.

21.2.10 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 District or that the District has the right to withhold pursuant to provisions herein, shall be paid:
 - **21.3.1.1** After approval by the Architect of the Application and Certificate of Payment,
 - **21.3.1.2** After the satisfaction of the conditions set forth herein, and
 - **21.3.1.3** After forty-five (45) days after the recording of the Notice of Completion by District.
- **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 District and the Contractor pursuant to Public Contract Code section 22300.

21.4 <u>Substitution of Securities</u>

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

22. UNCOVERING OF WORK

If a portion of the Work is covered without Inspector or Architect approval or not in compliance with the Contract Documents, it must, if required in writing by the District, the Project Inspector, or the Architect, be uncovered for the Project Inspector's or the Architect's observation and be corrected, replaced, and/or recovered at the Contractor's expense without change in the Contract Price or Contract Time.

23. NONCONFORMING WORK AND CORRECTION OF WORK

23.1 Nonconforming Work

- **23.1.1** Contractor shall promptly remove from Premises all Work identified by District as failing to conform to the Contract Documents whether incorporated or not. Contractor shall promptly replace and re-execute its own Work to comply with the Contract Documents without additional expense to the District 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 District or other Contractors caused thereby.
- **23.1.2** If Contractor does not remove Work that District has identified as failing to conform to the Contract Documents within a reasonable time, not to exceed **FORTY-EIGHT (48)** hours, District may remove it and may store any material at Contractor's expense. If Contractor does not pay expense(s) of that removal within ten (10) days' time thereafter, District 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 District and/or District 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 immediately correct the Work rejected by the District, the Architect, or the Project Inspector 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 Inspector's or the Architect's services and expenses made necessary thereby.

23.2.2 <u>One-Year Warranty Corrections</u>

If, within one (1) year after the date of Completion of the Work or a designated portion thereof, or after the date for 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 District to do so. This period of one (1) year 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 hereunder shall survive District's acceptance of the Work under the Contract and termination of the Contract. The District shall give such notice promptly after discovery of the condition.

23.3 District'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 District, 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 and/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, District may require at its option:
 - **23.3.2.1** That all such 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 District;
 - **23.3.2.2** That the District 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 and Specifications; or
 - **23.3.2.3** That the District exercise any other remedy it may have at law or under the Contract Documents, including but not limited to the District hiring its

own forces or another contractor to replace the Contractor's nonconforming Work, in which case the District 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 District may withhold those amounts from payment(s) to Contractor.

24. TERMINATION AND SUSPENSION

24.1 District's Request for Assurances

If District at any time reasonably believes Contractor is or may be in default under this Contract, District may in its sole discretion notify Contractor of this fact and request written assurances from Contractor of performance of Work and a written plan from Contractor to remedy any potential default under the terms this Contract that the District may advise Contractor of in writing. Contractor shall, within ten (10) calendar days of District's request, deliver a written cure plan that meets the District's requirements in its request for assurances. Contractor's failure to provide such written assurances of performance and the required written plan, within ten (10) calendar days of request, will constitute a material breach of this Contract sufficient to justify termination for cause.

24.2 <u>District's Right to Terminate Contractor for Cause</u>

- **24.2.1 Grounds for Termination:** The District, in its sole discretion, may terminate the Contract and/or terminate the Contractor's right to perform the work of the Contract based upon any of the following:
 - **24.2.1.1** 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
 - **24.2.1.2** Contractor fails to complete said Work within the time specified or any extension thereof, or
 - **24.2.1.3** Contractor persistently fails or refuses to perform Work or provide material of sufficient quality as to be in compliance with Contract Documents; or
 - **24.2.1.4** Contractor persistently refuses, or repeatedly 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
 - **24.2.1.5** Contractor fails to make prompt payment to Subcontractors, or for material, or for labor; or
 - **24.2.1.6** Contractor persistently disregards laws, or ordinances, or instructions of District; or
 - **24.2.1.7** Contractor fails to supply labor, including that of Subcontractors, that is sufficient to prosecute the Work or that can work in harmony with all other elements of labor employed or to be employed on the Work; or

24.2.1.8 Contractor or its Subcontractor(s) is/are otherwise in breach, default, or in substantial violation of any provision of this Contract, including but not limited to a lapse in licensing or registration.

24.2.2 **Notification of Termination**

- **24.2.2.1** Upon the occurrence at District's sole determination of any of the above conditions, District may, without prejudice to any other right or remedy, serve written notice upon Contractor and its Surety of District'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) days after the service of the notice, any and all condition(s) shall cease, and any and all violation(s) shall cease, or arrangement satisfactory to District for the correction of the condition(s) and/or violation(s) be made, this Contract and/or the Contractor's right to perform the Work of the Contract shall cease and terminate. Upon termination, Contractor shall not be entitled to receive any further payment until the entire Work is finished.
- 24.2.2.2 Upon Termination, District 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:
 - 24.2.2.2.1 Within three (3) days after service upon it of the notice of tender, gives District written notice of Surety's intention to take over and perform this Contract; and
 - 24.2.2.2.2 Commences performance of this Contract within three (3) days from date of serving of its notice to District.
- **24.2.2.3** Surety shall not utilize Contractor in completing the Project if the District notifies Surety of the District's objection to Contractor's further participation in the completion of the Project. Surety expressly agrees that any contractor which Surety proposes to fulfill Surety's obligations is subject to District's approval. District's approval shall not be unreasonably withheld, conditioned or delayed.
- **24.2.2.4** If Surety fails to notify District or begin performance as indicated herein, District 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 District for any excess cost or other damages the District incurs thereby. Time is of the essence in this Contract. If the District takes over the Work as herein provided, District 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.

Termination of Contractor for Convenience 24.3

District in its sole discretion may terminate the Contract in whole or in part upon three (3) days' written notice to the Contractor.

- **24.3.2** Upon notice, Contractor shall:
 - **24.3.2.1** Cease operations as directed by the District in the notice;
 - **24.3.2.2** Take necessary actions for the protection and preservation of the Work as soon as possible; and
 - **24.3.2.3** Terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.
- **24.3.3** Within 30 days of the notice, Contractor submit to the District a payment application for the actual cost for labor, materials, and services performed, including all Contractor's and Subcontractor(s)' mobilization and/or demobilization costs, that is unpaid. Contractor shall have no claims against the District except for the actual cost for labor, materials, and services performed that adequately documented through timesheets, invoices, receipts, or otherwise. District shall pay all undisputed invoice(s) for work performed until the notice of termination.
- **24.3.4** Under a termination for convenience, the District retains the right to all the options available to the District if there is a termination for cause.

24.4 <u>Effect of Termination</u>

- **24.4.1** Contractor shall, only if ordered to do so by the District, 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 District 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 to the District by reason of the Contractor's failure to complete the Contract.
- **24.4.2** In the event that the District shall perform any portion of, or the whole of the Work, pursuant to the provisions of the General Conditions, the District shall not be liable nor account to the Contractor in any way for the time within which, or the manner in which, the Work is performed by the District or for any changes the District may make in the Work or for the money expended by the District in satisfying claims and/or suits and/or other obligations in connection with the Work.
- **24.4.3** In the event termination for cause is determined to have not been for cause, the termination shall be deemed to have been a termination for convenience effective as of the same date as the purported termination for cause.
- **24.4.4** 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 or any impact or impairment of Contractor's bonding capacity.
- **24.4.5** If the expense to the District to finish the Work exceeds the unpaid Contract Price, Contractor and Surety shall pay difference to District within twenty-one (21) days of District's request.

- The District 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 District, no Subcontractor shall have any claim against the District or third party for Work performed by Subcontractor or other matters arising prior to termination of the Contract. The District 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 District so elect, the Contractor shall execute and deliver all documents and take all steps, including the legal assignment of its contractual rights, as the District may require, for the purpose of fully vesting in the District the rights and benefits of its Subcontractor under Subcontracts or other obligations or commitments. All payments due the Contractor hereunder shall be subject to a right of offset by the District for expenses and damages suffered by the District 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.
- **24.4.7** The foregoing provisions are in addition to and not in limitation of any other rights or remedies available to District.

24.5 Emergency Termination of Public Contracts Act of 1949

24.5.1 This Contract is subject to termination as provided by sections 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.

24.5.1.1 Section 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.

24.5.1.2 Section 4411 of the Government Code states:

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.

24.5.2 Compensation to the Contractor shall be determined at the sole discretion of District on the basis of the reasonable value of the Work done, including preparatory work. As an exception to the foregoing and at the District'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. The District, at its sole discretion, may adopt the Contract Price as the reasonable value of the work done or any portion thereof.

24.6 Suspension of Work

- **24.6.1** District in its sole discretion may suspend, delay or interrupt the Work in whole or in part for such period of time as the District may determine upon three (3) days written notice to the Contractor.
 - **24.6.1.1** An adjustment may be made for changes in the cost of performance of the Work caused by any such suspension, delay or interruption. No adjustment shall be made to the extent:
 - **24.6.1.1.1** That performance is, was or would have been so suspended, delayed or interrupted by another cause for which Contractor is responsible; or
 - **24.6.1.1.2** That an equitable adjustment is made or denied under another provision of the Contract; or
 - **24.6.1.1.3** That the suspension of Work was the direct or indirect result of Contractor's failure to perform any of its obligations hereunder.
 - **24.6.1.2** Any adjustments in cost of performance may have a fixed or percentage fee as provided in the section on Format for Proposed Change Order herein. This amount shall be full compensation for all Contractor's and its Subcontractor(s)' changes in the cost of performance of the Contract caused by any such suspension, delay or interruption.

25. CLAIMS PROCESS

25.1 Obligation to File Claims for Disputed Work

- **25.1.1** Should Contractor otherwise seek extra time or compensation for any reason whatsoever ("Disputed Work"), then Contractor shall first follow procedures set forth in the Contract Documents including, without limitation, Articles 15, 16 and 17, all of which are conditions precedent to submitting a Claim pursuant to Article 25. A Notice of Delay or Proposed Change Order are less formal procedures that proceed the formal claim and do not constitute a Claim. A Claim also does not include correspondence, RFIs, vouchers, invoices, progress payment applications, or other routine or authorized form of requests for progress payments in compliance with the Contract. If a dispute remains, then Contractor shall give written notice to District that expressly invokes this Article 25 within the time limits set forth herein.
- **25.1.2** Contractor's sole and exclusive remedy for Disputed Work is to file a written claim setting forth Contractor's position as required herein within the time limits set forth herein.

25.2 <u>Duty to Perform during Claims Process</u>

Contractor and its subcontractors shall continue to perform its Work under the Contract including the disputed work, and shall not cause a delay of the Work during any dispute, claim, negotiation, mediation, or arbitration proceeding, except by written agreement by the District.

25.3 Definition of a Claim

- **25.3.1** Pursuant to Public Contract Code section 9204, the term "Claim" means a separate demand by the Contractor, sent by registered mail or certified mail with return receipt requested, for one or more of the following:
 - **25.3.1.1** A time extension, including without limitation, for relief of damages or penalties for delay assessed by the District under the Contract;
 - **25.3.1.2** Payment by the District 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 to which Contractor is not otherwise entitled to; or
 - **25.3.1.3** An amount of payment disputed by the District.

25.4 <u>Claims Presentation</u>

- **25.4.1** Form and Contents of Claim
 - **25.4.1.1** If Contractor intends to submit a Claim for an increase in the Contract Price and/or Contract Time for any reason including, without limitation, the acts of District or its agents, Contractor shall, within thirty (30) days after the event giving rise to the Claim, give notice of the Claim ("Notice of Potential Claim") in writing specifically identifying Contractor is invoking this Article 25 Claims Presentation. The Notice of Potential Claim shall provide Contractor's preliminary request for an adjustment to the Contract Price and/or Contract Time, with a description of the grounds therefore.
 - **25.4.1.2** Within thirty (30) days after serving the written Notice of Potential Claim, Contractor shall provide a Claim including an itemized statement of the details and amounts of its Claim for any increase in the Contract Price of Contract Time as provided below, including a Time Impact Analysis and any and all other documentation substantiating Contractor's claimed damages:
 - **25.4.1.2.1** The issues, events, conditions, circumstances and/or causes giving rise to the dispute, and shall show, in detail, the cause and effect of same;
 - **25.4.1.2.2** Citation to provisions in the Contract Documents, statute sections, and/or case law entitling Contractor to an increase in the Contract Price or Contract Time;
 - **25.4.1.2.3** The pertinent dates and/or durations and actual and/or anticipated effects on the Contract Price, Contract Schedule milestones and/or Contract Time adjustments;
 - **25.4.1.2.4** The Time Impact Analysis of all time delays that shows actual time impact on the critical path; and
 - **25.4.1.2.5** The line-item costs for labor, material, and/or equipment, if applicable, for all cost impacts priced like a change order according to Article

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17 and must be updated monthly as to cost and entitlement if a continuing claim.

- **25.4.1.3** The Claim shall include the following certification by the Contractor:
 - **25.4.1.3.1** The undersigned Contractor certifies under penalty of perjury that the attached dispute is made in good faith; that the supporting data is accurate and complete to the best of my knowledge and belief; that the amount requested accurately reflects the adjustment for which Contractor believes the District is liable; and that I am duly authorized to certify the dispute on behalf of the Contractor.
 - **25.4.1.3.2** Furthermore, Contractor understands that the value of the attached dispute expressly includes any and all of the Contractor's costs and expenses, direct and indirect, resulting from the Work performed on the Project, additional time required on the Project and/or resulting from delay to the Project including, without limitation, cumulative impacts. Contractor may not separately recover for overhead or other indirect costs. Any costs, expenses, damages, or time extensions not included are deemed waived.
- **25.4.2** Contractor shall bear all costs incurred in the preparation and submission of a Claim.
- **25.4.3** Failure to timely submit a Claim and the requisite supporting documentation shall constitute a waiver of Contractor's claim(s) against the District and Contractor's Claims for compensation or an extension of time shall be deemed waived, released, and discharged as to any entitlement for adjustment to the Contract Price and, or Contract Time.

25.5 Claim Resolution pursuant to Public Contract Code section 9204

Contractor may request to waive the claims procedure under Public Contract Code section 9204 and proceed directly to the commencement of a civil action or binding arbitration. If Contractor chooses to proceed, Contractor shall comply with the following steps.

25.5.1 STEP 1:

25.5.1.1 Upon receipt of a Claim by registered or certified mail, return receipt requested, including the documents necessary to substantiate it, the District shall conduct a reasonable review of the Claim and, within a period not to exceed 45 days, shall provide the Contractor a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Upon receipt of a Claim, the District and Contractor may, by mutual agreement, extend the time period to provide a written statement. If the District needs approval from its governing body to provide the Contractor a written statement identifying the disputed portion and the undisputed portion of the Claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of Claim sent by registered mail or certified mail, return receipt requested, the District shall have up to three (3) days following the next duly publicly noticed meeting of the governing body after the 45-day period, or

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extension, expires to provide Contractor a written statement identifying the disputed portion and the undisputed portion.

- **25.5.1.1.1** Any payment due on an undisputed portion of the Claim shall be processed and made within 60 days after the District issues its written statement. Amounts not paid in a timely manner as required by this section, section 25.4, shall bear interest at seven percent (7%) per annum.
- **25.5.1.2** Upon receipt of a Claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable. In this instance, District and Contractor must comply with the sections below regarding Public Contract Code section 20104 et seq. and Government Code Claim Act Claims.
- **25.5.1.3** If the District fails to issue a written statement, or to otherwise meet the time requirements of this section, this shall result in the Claim being deemed rejected in its entirety. A claim that is denied by reason of the District's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of Contractor.

25.5.2 STEP 2:

- **25.5.2.1** If Contractor disputes the District's written response, or if the District fails to respond to a Claim within the time prescribed, Contractor may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the District shall schedule a meet and confer conference within 30 days for settlement of the dispute. Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the District shall provide the Contractor a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed.
 - **25.5.2.1.1.1** Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the District issues its written statement. Amounts not paid in a timely manner as required by this section, section 25.4, shall bear interest at seven percent (7%) per annum.

25.5.3 STEP 3:

25.5.3.1 Any disputed portion of the claim, as identified by Contractor in writing, shall be submitted to nonbinding mediation, with the District and Contractor sharing the associated costs equally. The District and Contractor shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is

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

- **25.5.3.1.1** For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
- **25.5.3.2** Unless otherwise agreed to by the District and Contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Public Contract Code section 20104.4 to mediate after litigation has been commenced.

25.5.4 STEP 4:

25.5.4.1 If mediation under this section does not resolve the parties' dispute, the District may, but does not require arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program.

25.6 <u>Subcontractor Pass-Through Claims</u>

- **25.6.1** If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a District because privity of contract does not exist, the contractor may present to the District a Claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that Contractor present a Claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the Claim be presented to the District shall furnish reasonable documentation to support the Claim.
- **25.6.2** Within 45 days of receipt of this written request from a subcontractor, Contractor shall notify the subcontractor in writing as to whether the Contractor presented the Claim to the District and, if Contractor did not present the Claim, provide the subcontractor with a statement of the reasons for not having done so.
- **25.6.3** The Contractor shall bind all its Subcontractors to the provisions of this section and will hold the District harmless against Claims by Subcontractors.

25.7 Government Code Claim Act Claim

- **25.7.1** If a claim, or any portion thereof, remains in dispute upon satisfaction of all applicable Claim Resolution requirements the Contractor shall comply with all claims presentation requirements as provided in Chapter 1 (commencing with section 900) and Chapter 2 (commencing with section 910) of Part 3 of Division 3.6 of Title 1 of Government Code as a condition precedent to the Contractor's right to bring a civil action against the District.
- **25.7.2** Contractor shall bear all costs incurred in the preparation, submission and administration of a Claim. Any claims presented in accordance with the Government

Code must affirmatively indicate Contractor's prior compliance with the claims procedure herein of the claims asserted.

For purposes of those provisions, the running of the time within which a claim pursuant to Public Contract Code section 20104.2 only must be presented to the District shall be tolled from the time the claimant submits his or her written claim pursuant to subdivision (a) until the time that claim is denied as a result of the meet and confer process, including any period of time utilized by the meet and confer process.

25.8 Claim Resolution pursuant to Public Contract Code section 20104 et

- 25.8.1 In the event of a disagreement 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 all Claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between Contractor and District by those procedures set forth in Public Contract Code section 20104, et seg., to the extent applicable.
 - **25.8.1.1** Contractor shall file with the District any written Claim, including the documents necessary to substantiate it, upon the application for final payment.
 - **25.8.1.2** For claims of less than fifty thousand dollars (\$50,000), the District shall respond in writing within forty-five (45) days of receipt of the Claim or may request in writing within thirty (30) days of receipt of the Claim any additional documentation supporting the claim or relating to defenses or claims the District may have against the Contractor.
 - 25.8.1.2.1 If additional information is required, it shall be requested and provided by mutual agreement of the parties.
 - District's written response to the documented Claim shall be submitted to the Contractor within fifteen (15) days after receipt of the further documentation or within a period of time no greater than that taken by the Contractor to produce the additional information, whichever is greater.
 - 25.8.1.3 For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the District shall respond in writing to all written Claims within sixty (60) days of receipt of the claim, or may request, in writing, within thirty (30) days of receipt of the Claim any additional documentation supporting the Claim or relating to defenses or claims the District may have against the Contractor.
 - If additional information is required, it shall be requested and provided upon mutual agreement of the District and the Contractor.
 - The District's written response to the claim, as further 25.8.1.3.2 documented, shall be submitted to the Contractor within thirty (30) days after receipt of the further documentation, or within a period of time no greater than that taken by the Contractor to produce the additional information or requested documentation, whichever is greater.

25.8.1.4 If Contractor disputes the District's written response, or the District fails to respond within the time prescribed, Contractor may so notify the District, in writing, either within fifteen (15) days of receipt of the District's response or within fifteen (15) days of the District's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the District shall schedule a meet and confer conference within thirty (30) days for settlement of the dispute.

- **25.8.1.5** Following the meet and confer conference, if the claim or any portion of it remains in dispute, the Contractor may file a claim as provided in Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions the running of the time within which a claim must be filed shall be tolled from the time the Contractor submits its written Claim until the time the Claim is denied, including any period of time utilized by the meet and confer process.
- **25.8.1.6** For any civil action filed to resolve claims filed pursuant to this section, within sixty (60) days, but no earlier than thirty (30) days, following the filing of responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within fifteen (15) days by both parties of a disinterested third person as mediator, shall be commenced within thirty (30) days of the submittal, and shall be concluded within fifteen (15) days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court or by stipulation of both parties. If the parties fail to select a mediator within the 15-day period, any party may petition the court to appoint the mediator.
- **25.8.1.7** If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1141.10) of the Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1141.11 of that code. The Civil Discovery Act of 1986, (Article 3 (commencing with Section 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.
- **25.8.1.8** The District shall not fail to pay money as to any portion of a Claim which is undisputed except as otherwise provided in the Contract Documents. In any suit filed pursuant to this section, the District shall pay interest due 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.
- **25.8.2** Contractor shall bind its Subcontractors to the provisions of this Section and will hold the District harmless against disputes by Subcontractors.

25.9 <u>Claim Procedure Compliance</u>

25.9.1 Failure to submit and administer claims as required in Article 25 shall waive Contractor's right to claim on any specific issues not included in a timely submitted claim. Claim(s) not raised in a timely protest and timely claim submitted

under this Article 25 may not be asserted in any subsequent litigation, Government Code Claim, or legal action.

25.9.2 District shall not be deemed to waive any provision under this Article 25, if at District's sole discretion, a claim is administered in a manner not in accord with this Article 25. Waivers or modifications of this Article 25 may only be made by a signed change order approved as to form by legal counsel for both District and Contractor; oral or implied modifications shall be ineffective.

25.10 <u>Claim Resolution Non-Applicability</u>

- **25.10.1** The procedures for dispute and claim resolutions set forth in this Article shall not apply to the following:
 - **25.10.1.1** Personal injury, wrongful death or property damage claims;
 - 25.10.1.2Latent defect or breach of warranty or guarantee to repair;
 - 25.10.1.3 Stop payment notices;
 - 25.10.1.4 District's rights set forth in the Article on Suspension and Termination;
 - **25.10.1.5** Disputes arising out of labor compliance enforcement by the Department of Industrial Relations; or
 - **25.10.1.6** District rights and obligations as a public entity set forth in applicable statutes; provided, however, that penalties imposed against a public entity by statutes, including, but not limited to, Public Contract Code sections 20104.50 and 7107, shall be subject to the Claim Resolution requirements provided in this Article.

25.11 Attorney's Fees

Should litigation be necessary to enforce any terms or provisions of this Agreement, then each party shall bear its own litigation and collection expenses, witness fees, court costs, and attorney's fees.

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

26.1 Labor Compliance and Enforcement

Since this Project is subject to labor compliance and enforcement by the Department of Industrial Relations ("DIR"), Contractor specifically acknowledges and understands that it shall perform the Work of this Agreement while complying with all the applicable provisions of Division 2, Part 7, Chapter 1, of the Labor Code and Title 8 of the California Code of Regulations, including, without limitation, the requirement that the Contractor and all Subcontractors shall timely furnish complete and accurate electronic certified payroll records directly to the DIR. The District may not issue payment if this requirement is not met.

26.2 Wage Rates, Travel, and Subsistence

- **26.2.1** Pursuant to the provisions of Article 2 (commencing at section 1770), Chapter 1, Part 7, Division 2, of the Labor Code, 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 are on file at the District'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.
- **26.2.2** Holiday and overtime work, when permitted by law, shall be paid for at the general prevailing rate of per diem wages for holiday and overtime work on file with the Director of the Department of Industrial Relations, unless otherwise specified. The holidays upon which those rates shall be paid need not be specified by the District, 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 Section 6700 of the Government Code.
- **26.2.3** Contractor shall pay and shall cause to be paid each worker engaged in Work on the Project the general prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations, regardless of any contractual relationship which may be alleged to exist between Contractor or any Subcontractor and such workers.
- **26.2.4** If during the period this bid is required to remain open, the Director of the Department of Industrial Relations 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.
- **26.2.5** Pursuant to Labor Code section 1775, Contractor shall, as a penalty to District, forfeit the statutory amount (believed by the District to be currently up to two hundred dollars (\$200) for each calendar day, or portion thereof, for each worker paid less than the prevailing rates, determined by the District 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.
- **26.2.6** 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.
- **26.2.7** Pursuant to Labor Code section 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 Labor Code section 3093, and similar purposes.

26.2.8 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).

26.3 Hours of Work

- **26.3.1** As provided in article 3 (commencing at section 1810), chapter 1, part 7, division 2, of the Labor Code, eight (8) hours of labor shall constitute a legal day's 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.
- **26.3.2** 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 District and to the Division of Labor Standards Enforcement of the DIR.
- **26.3.3** Pursuant to Labor Code section 1813, Contractor shall as a penalty to the District forfeit the statutory amount (believed by the District to be currently twenty-five dollars (\$25)) 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 at section 1810), chapter 1, part 7, division 2, of the Labor Code.
- **26.3.4** Any Work necessary to be performed after regular working hours, or on Sundays or other holidays shall be performed without additional expense to the District.

26.4 Payroll Records

26.4.1 Contractor shall upload, and shall cause each Subcontractor performing any portion of the Work under this Contract to upload, an accurate and complete certified payroll record ("CPR") electronically using DIR's eCPR System by uploading the CPRs by electronic XML file or entering each record manually using the DIR's iform (or current form) online on no less than every 30 days while Work is being performed and within 30 days after the final day of Work performed on the Project and within ten (10 days of any request by the District or Labor Commissioner at http://www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html or current application and URL, 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

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employee employed by the Contractor and/or each Subcontractor in connection with the Work.

- **26.4.1.1** The CPRs enumerated hereunder shall be filed directly with the DIR on a weekly basis or to the requesting party, whether the District or DIR, within ten (10) days after receipt of each written request. 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. District may not make any payment to Contractor until:
 - **26.4.1.1.1** Contractor and/or its Subcontractor(s) provide CPRs acceptable to the DIR; and
 - **26.4.1.1.2** Any delay in Contractor and/or its Subcontractor(s) providing CPRs to the DIR in a timely manner may directly delay Contractor's payment.
- **26.4.2** All CPRs shall be available for inspection at all reasonable hours at the principal office of Contractor on the following basis:
 - **26.4.2.1** A certified copy of an employee's CPR shall be made available for inspection or furnished to the employee or his/her authorized representative on request.
 - **26.4.2.2** CPRs shall be made available for inspection or furnished upon request to a representative of District, Division of Labor Standards Enforcement, Division of Apprenticeship Standards, and/or the DIR.
 - **26.4.2.3** CPRs shall be made available upon request by the public for inspection or copies thereof made; provided, however, that a request by the public shall be made through the District, Division of Apprenticeship Standards, or the Division of Labor Standards Enforcement. If the requested CPRs have not been provided pursuant to the provisions herein, 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.
- **26.4.3** Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by District, 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.
- **26.4.4** Contractor shall inform District 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.
- **26.4.5** 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 District, forfeit up to one hundred dollars (\$100) for each calendar

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day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Labor Commissioner, these penalties shall be withheld from progress payments then due.

26.4.6 [RESERVED]

26.5 [RESERVED]

26.6 Apprentices

- **26.6.1** 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 section 1777.5, then this Contract is governed by the provisions of Labor Code Section 1777.5. It shall be the responsibility of Contractor to ensure compliance with this Article and with Labor Code section 1777.5 for all apprenticeship occupations.
- **26.6.2** Apprentices of any crafts or trades may be employed and, when required by Labor Code section 1777.5, shall be employed provided they are properly registered in full compliance with the provisions of the Labor Code.
- **26.6.3** Every such apprentice shall be paid the standard wage paid to apprentices under the regulations of the craft or trade at which he/she is employed, and shall be employed only at the work of the craft or trade to which she/he is registered.
- **26.6.4** Only apprentices, as defined in section 3077 of the Labor Code, who are in training under apprenticeship standards and written apprentice agreements under chapter 4 (commencing at section 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 he/she is training.
- **26.6.5** Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, 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.
- **26.6.6** Pursuant to Labor Code section 1777.5, if that section applies to this Contract as indicated above, Contractor and any Subcontractor may be required to make contributions to the apprenticeship program.
- **26.6.7** If Contractor or Subcontractor willfully fails to comply with Labor Code section 1777.5, then, upon a determination of noncompliance by the Administrator of Apprenticeship, it shall:
 - **26.6.7.1** Be denied the right to bid on any subsequent project for one (1) year from the date of such determination;
 - **26.6.7.2** Forfeit as a penalty to District the full amount as stated in Labor Code section 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.

26.6.8 Contractor and all Subcontractors shall comply with Labor Code section 1777.6, which section forbids certain discriminatory practices in the employment of

26.6.9 Contractor shall become fully acquainted with the law regarding apprentices prior to commencement of the Work. Special attention is directed to sections 1777.5, 1777.6, and 1777.7 of the Labor Code, and title 8, California Code of Regulations, section 200 et seq. Questions may be directed to the State Division of Apprenticeship Standards, 455 Golden Gate Avenue, 9th floor, San Francisco, California 94102.

26.7 Non-Discrimination

apprentices.

- **26.7.1** Contractor herein agrees 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 section 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.
- **26.7.2** Special requirements for Federally Assisted Construction Contracts: During the performance of this Contract, Contractor agrees to incorporate in all subcontracts the provisions set forth in Chapter 60-1.4(b) of Title 41 published in Volume 33 No. 104 of the Federal Register dated May 28, 1968.

26.8 Labor First Aid

Contractor shall maintain emergency 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.*) and the California Occupational Safety and Health Act of 1973 (Lab. Code, § 6300, et seq.; 8 Cal. Code of Regs., § 330, et seq.).

27. [RESERVED]

28. MISCELLANEOUS

28.1 Assignment of Antitrust Actions

28.1.1 Section 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 Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commending with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, which 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.

28.1.2 Section 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 Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 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.

28.1.3 Section 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.

28.1.4 Section 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.

28.1.5 Under this Article, "public purchasing body" is District and "bidder" is Contractor.

28.2 <u>Excise Taxes</u>

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, District, upon request, will execute documents necessary to show (1) that District is a political subdivision of the State for the purposes of such exemption, and (2) that the sale is for the exclusive use of District. No Federal Excise Tax for such materials shall be included in any Contract Price.

28.3 <u>Taxes</u>

Contract Price is to include any and all applicable sales taxes or other taxes that may be due in accordance with section 7051 et seq. of the Revenue and Taxation Code, Regulation 1521 of the State Board of Equalization or any other tax code that may be applicable.

28.4 **Shipments**

Contractor is responsible for any or all damage or loss to shipments until delivered and accepted on Site, 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.

28.5 <u>Compliance with Government Reporting Requirements</u>

If this Contract is subject to federal or other governmental reporting requirements because of federal or other governmental financing in whole or in part for the Project of which it is part, or for any other reason, Contactor shall comply with those reporting requirements at the request of the District at no additional cost.

END OF DOCUMENT



Project Number: 23

DOCUMENT 00 73 13

SPECIAL CONDITIONS

1. <u>Mitigation Measures</u>

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. Campus and Adjacent Buildings

- **Access**. Access to the school buildings and entry to buildings, classrooms, restrooms, mechanical rooms, electrical rooms, or other rooms, for construction purposes, must be coordinated with District and onsite District personnel before Work is to start. Unless agreed to otherwise in writing, only a school custodian will be allowed to unlock and lock doors in existing building(s). The custodian will be available only while school is in session. If a custodian is required to arrive before 7:00 a.m. or leave after 3:30 p.m. to accommodate Contractor's Work, the overtime wages for the custodian will be paid by the Contractor, unless at the discretion of the District, other arrangements are made in advance.
- **Legs.** Upon request, the District may, at its own discretion, provide keys to the school site for the convenience of the Contractor. The Contractor agrees to pay all expenses to re-key the entire school site and all other affected District buildings if the keys are lost or stolen, or if any unauthorized party obtains a copy of a key or access to the school.
- **Maintaining Services.** The Contractor is advised that Work is to be performed in spaces regularly scheduled for instruction. Interruption and/or periods of shutdown of public access, electrical service, water service, lighting, or other utilities shall be only as arranged in advance with the District. Contractor shall provide temporary services to all facilities interrupted by Contractor's Work.
- **2.4** <u>Maintaining Utilities</u>. The Contractor shall maintain in operation during duration of Contract, drainage lines, storm drains, sewers, water, gas, electrical, steam, and other utility service lines within working area.
- **2.5** <u>Confidentiality</u>. Contractor shall maintain the confidentiality of all information, documents, programs, procedures and all other items that Contractor encounters while performing the Work. This requirement shall be ongoing and shall survive the expiration or termination of this Contract and specifically includes, without limitation, all student, parent, and employee disciplinary information and health information.
- **2.6 Work during Instructional Time**. By submitting its bid, Contractor affirms that Work may be performed during ongoing instruction in existing facilities. If so, Contractor agrees to cooperate to the best of its ability to minimize any disruption to school operations and any use of school facilities by the public up to, and including, rescheduling specific work activities, at no additional cost to District.

2.7 No Work during Student Testing. Contractor shall, at no additional cost to the District and at the District's request, coordinate its Work to not disturb District students including, without limitation, not performing any Work when students at the Site are taking State or Federally-required tests.

3. Badge Policy for Contractors

All Contractors doing work for the District 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 District facility.

- **3.1** Badges must be filled out in full and contain the following information:
 - **3.1.1** Name of Contractor
 - **3.1.2** Name of Employee
 - **3.1.3** Contractor's address and phone number
- **3.2** Badges are to be worn when the Contractor or his/her employees are on site and must be visible at all times. Contractors must inform their employees that they are required to allow District employees, the Architect, the Construction Manager, the Program Manager, or the Project Inspector to review the information on the badges upon request.
- **3.3** Continued failure to display identification badges as required by this policy may result in the individual being removed from the Project or assessment of fines against the Contractor.

4. <u>Substitutions for Specified Items</u>

Replace Section 1.7 in the General Conditions with the following provisions:

- **1.7.1** 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.
 - **1.7.1.1** If the material, process, or article offered by Contractor is not, in the opinion of the District, 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.
 - 1.7.1.2 This provision shall not be applicable with respect to any material, product, thing or service for which District made findings and gave notice in accordance with Public Contract Code section 3400(c); therefore, Contractor shall not be entitled to request a substitution with respect to those materials, products or services.

- **1.7.2** A request for a substitution shall be submitted as follows:
 - **1.7.2.1** Contractor shall notify the District in writing of any request for a substitution at least ten (10) days prior to bid opening as indicated in the Instructions to Bidders.
- **1.7.3** Within 35 days after the date of the Notice of Award, Contractor shall provide data substantiating a request for substitution of "an equal" item, including but not limited to the following:
 - **1.7.3.1** 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;
 - **1.7.3.2** Available maintenance, repair or replacement services;
 - **1.7.3.3** Increases or decreases in operating, maintenance, repair, replacement, and spare parts costs;
 - 1.7.3.4 Whether or not acceptance of the substitute will require other changes in the Work (or in work performed by the District or others under Contract with the District); and
 - **1.7.3.5** The time impact on any part of the Work resulting directly or indirectly from acceptance of the proposed substitute.
- **1.7.4** No substitutions shall be made until approved, in writing, by the District. 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:
 - 1.7.4.1 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;
 - **1.7.4.2** The Contractor provides the same warranties and guarantees for the substitute that would be provided for that specified;
 - 1.7.4.3 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;
 - **1.7.4.4** The Contractor shall be responsible for any re-design costs occasioned by District's acceptance and/or approval of any substitute; and

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- 1.7.4.5 The Contractor shall, in the event that a substitute is less costly than that specified, credit the District 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.
- **1.7.5** 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.
- **1.7.6** In no event shall the District 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.
- 1.7.7 Contractor shall be responsible for any costs the District incurs for professional services, DSA fees, or delay to the Project Schedule, if applicable, while DSA reviews changes for the convenience of Contractor and/or to accommodate Contractor's means and methods. District may deduct those costs from any amounts owing to the Contractor for the review of the request for substitution, even if the request for substitution is not approved. District, at its sole discretion, shall deduct from the payments due to and/or invoice Contractor for all the professional services and/or DSA fees or delay to the Project Schedule, if applicable, while DSA reviews changes for the convenience of Contractor and/or to accommodate Contractor's means and methods arising herein.

5. Weather Days

Replace Section 15.2.1.5 in the General Conditions with the following:

15.2.1.5 The number of days of Adverse Weather exceeds the following parameters:

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

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6. [RESERVED]

7. Insurance Policy Limits

All of Contractor's insurance shall be with insurance companies with an A.M. Best rating of no less than A:XV. The limits of insurance shall not be less than:

Commercial General Liability	Product Liability and Completed Operations, Fire Damage Liability – Split Limit	\$2,000,000 per occurrence; \$4,000,000 aggregate
Automobile Liability – Any Auto	Combined Single Limit	\$1,000,000 per Occurrence \$2,000,000 Aggregate
Workers' Compensation		Statutory limits pursuant to State law
Employers' Liability		\$1,000,000
Builder's Risk (Course of Construction)		Issued for the value and scope of Work indicated herein.
Pollution Liability		\$1,000,000 per claim \$2,000,000 Aggregate

8. <u>Permits, Certificates, Licenses, Fees, Approvals</u>

- **8.1** Payment for Permits, Certificates, Licenses, Fees, and Approvals. As required in the General Conditions, the Contractor shall secure and pay for all permits, licenses, approvals, and certificates necessary for the prosecution of the Work with the exception of the following:
 - Division of State Architect (DSA)

With respect to the above-listed items, Contractor shall be responsible for securing such items; however, District will be responsible for payment of these charges or fees. Contractor shall notify the District of the amount due with respect to such items and to whom the amount is payable. Contractor shall provide the District with an invoice and receipt with respect to such charges or fees.

9. [RESERVED]

10. As-Builts and Record Drawings

- **10.1** When called for by Division 1, Contractor shall submit As-Built Drawings pursuant to the Contract Documents consisting of one (1) set of computer-aided design and drafting ("CADD") files, and one (1) set of As-Built Drawings in PDF Format.
- **10.2** Contractor shall submit Record Drawings pursuant to the Contract Documents consisting of one (1) set of computer-aided design and drafting ("CADD") files, and one set of Record Drawings in PDF Format.

11. Disabled Veteran Business Enterprise

Pursuant to Education Code section 71028 and Public Contract Code section 10115, the District has a participation goal for disabled veteran business enterprises ("DVBE") of at least three percent (3%) per year of the overall dollar amount expended each year on projects that receive state funding. If this Contract uses state funds, and/or as required by the bid documents, the lowest responsive responsible bidder awarded the Contract must submit the Disabled Veteran Business Enterprise Participation Certification to the District with its executed Agreement, identifying the steps contractor took to solicit DVBE participation in conjunction with this Contract.

12. Construction Manager

The District will use a Construction/ Project Manager on the Project that is the subject of this Contract. Kitchell CEM is the Construction/ Project Manager for this Project.

13. Program Manager

Kitchell CEM is the Program Manager designated for the Project that is the subject of this Contract.

- 14. [RESERVED]
- 15. [RESERVED]
- 16. [RESERVED]

17. Preliminary Schedule of Values

The preliminary schedule of values shall include, at a minimum, the following information and the following structure:

Replace Section 10.1.1.2.3 in the General Conditions with the following provisions:

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

10.1.1.2.3.1 Mobilization and layout combined to equal not more than 2%;

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- **10.1.1.2.3.2** Submittals, samples and shop drawings combined to equal not more than 4%;
- **10.1.1.2.3.3** Bonds and insurance combined to equal not more than 2.5%.
- **10.1.1.2.3.4** Closeout documentation shall have a value in the preliminary schedule of not less than 5%.
- 10.1.1.2.3.1 Demobilization to equal not more than 2%;

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18. <u>Underground Survey of Existing Utilities</u>

The District will do their best ability to identify underground utilities, however prior to performing excavation activities the Contractor shall at their sole expense employ the services of a private locator to survey and ascertain the actual locations of existing underground utilities. Should the Contractor damage existing utilities during the prosecution of the work, they shall immediately notify the Construction Manager in writing and diligently affect repairs to the damaged utility. The Contractor shall be responsible for all repairs and consequential damages resulting from utility outages caused as a result of the performance of work.

19. Schedule of Operation

- **19.27** Construction shall be performed between the hours of 7:00 am and 5:00 pm, Monday through Friday. No work shall be performed outside the above hours without prior written authorization from the District / Construction Manager.
- **19.28** Cutting, chipping, and off-haul of all trees must be scheduled and completed during weekends, Holidays, or school breaks. Dates must be approved by the District / Construction Manager.

20. <u>Temporary Facilities</u>

20.27 The Contractor shall submit a project logistics plan to the Construction Manager for approval withing fifteen (15) calendar days from the Notice to Proceed date. The logistics plan shall define how the Contractor plans to control site processes including, but not limited to, means and methods to accommodate temporary utilities, temporary facilities, site traffic, off-site parking, materials delivery and material storage, temporary fending, etc. All subsequent relocation/modifications need to be approved by the District / Construction Manager.

21. Project Management Software

- **21.27** The District will be utilizing PROCORE to provide web-based project management software to track and manage this project. The contractor is required to use this software. Access to the software will be provided to the contractor at no cost for this project.
- **21.28** Use of this Project Management Software will not replace or change any contractual responsibilities of the project team members.
- **21.29** Training on the use of the software is provided at no cost by PROCORE on their website; https://www.procore.com/certification

22. COVID-19 Safety Requirements

Contractor shall, at its cost, timely comply with all applicable federal, State, local, and District requirements relating to COVID-19 or other public health emergency/epidemic/pandemic. Further, except to the extent the Order provides otherwise, Contractor and Contractor's personnel, subcontractors and suppliers shall continue to comply with all applicable terms in the California Department of Public Health's State Public Health Officer Orders.

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END OF DOCUMENT



DOCUMENT 00 73 56

HAZARDOUS MATERIALS PROCEDURES & REQUIREMENTS

1. Summary

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

2. Notice of Hazardous Waste or Materials

- a. Contractor shall give notice in writing to the District, the Construction Manager, and the Architect promptly, before any of the following materials are disturbed, and in no event later than twenty-four (24) hours after first observance, of any:
 - (1) Material that Contractor believes may be a material that is hazardous waste or hazardous material, as defined in section 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;
 - (2) Other material that may present a substantial danger to persons or property exposed thereto in connection with Work at the site.
- b. 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, Polychlorinated biphenyl (PCB), petroleum and related hydrocarbons, and radioactive material.
- c. In response to Contractor's written notice, the District shall investigate the identified conditions.
- d. If the District determines that conditions do not involve hazardous materials or that no change in terms of Contract is justified, the District shall so notify Contractor in writing, stating reasons. If the District and Contractor cannot agree on whether conditions justify an adjustment in Contract Price or Contract Time, or on the extent of any adjustment, Contractor shall proceed with the Work as directed by the District.
- e. If after receipt of notice from the District, 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 District 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 District may invoke its rights to terminate the Contract in whole or in part. District will determine entitlement to or the amount or extent of an adjustment, if any, in

Contract Price or Contract Time as a result of deleting such portion of Work, or performing the Work by others.

f. 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

- a. 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 laws and contractual 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).
- b. 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.
- c. 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

- a. District 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.
- b. Contractor acknowledges that District has the right to perform, or cause to be performed, various activities and tests including, but not limited to, preabatement, during abatement, and post-abatement air monitoring, that District 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 District elects to perform these activities and tests, Contractor shall afford District 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 District in the Contract Price and the Scheduled Completion Date.

c. Notwithstanding District'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, preabatement, during abatement, and post-abatement personal air monitoring, and District 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**

- Contractor shall perform safe, expeditious, and orderly work in accordance a. 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.
- Contractor represents that it is familiar with and shall comply with all laws b. 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:
 - The protection of the public health, welfare and environment; (1)
 - (2) Storage, handling, or use of asbestos, PCB, lead, petroleum based products, radioactive material, or other hazardous materials;
 - The generation, processing, treatment, storage, transport, disposal, (3) destruction, or other management of asbestos, PCB, lead, petroleum, radioactive material, or hazardous waste materials or other waste materials of any kind; and
 - The protection of environmentally sensitive areas such as wetlands (4) and coastal areas.

6. Disposal

Contractor has the sole responsibility for determining current waste storage, a. 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. District may, but is not obligated to, require submittals with this information for it to review consistent with the Contract Documents.

b. Contractor shall develop and implement a system acceptable to District to track hazardous waste from the Site to disposal, including appropriate "Hazardous Waste Manifests" on the EPA form, so that District may track the volume of waste it put in each landfill and receive from each landfill a certificate of receipt.

Contractor shall provide District with the name and address of each waste c. disposal facility prior to any disposal, and District shall have the express right to reject any proposed disposal facility. Contractor shall not use any disposal facility to which District 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 District.

7. **Permits**

- Before performing any of the Work, and at such other times as may be a. 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 District that it and any disposal facility:
 - (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
 - (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 District. 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 the 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 District in writing of such fact. If Contractor performs any Work contrary to applicable laws, it shall bear all costs arising therefrom.

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

8. Indemnification

To the fullest 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, a waste transporter, 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. § 960l et seq.).

9. Termination

District 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



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DOCUMENT 01 11 00

SUMMARY OF WORK

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 SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of this Contract consists of the following:
 - (1) All labor, materials, equipment, and supplies necessary for the completion of the entire scope of work as outlined in the contract documents. Includes all associated civil, architectural, structural, plumbing, mechanical, electrical and/or low voltage work as indicated in the Drawings and Specifications.
 - (2) Project includes the removal and replacement of the existing pool deck, the installation of new outdoor showers, new gates, and ADA upgrades.
 - (3) Contractor shall include safe-off of all utilities, including but not limited to all electrical, fire alarm, data, security, and plumbing as needed to complete the project scope.
 - (4) The scope of this project is further defined in the Contract Documents. The Contractor will provide all security fencing, safety barriers, portable toilets, and debris bins per the Contract Specifications. Multiple relocations of site fencing/ safety barriers may be required for the completion of this project. All campus pedestrian access shall be maintained, and existing buildings shall remain functional during the duration of the project.

1.03 CONTRACTS

A. Perform the Work under a single, fixed-price Contract.

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 identified.
- B. Work on the Project that will be performed by others concurrent with the Work of this Contract:
 - (1) None identified.

1.05 CODES, REGULATIONS, AND STANDARDS

- A. The codes, regulations, and standards adopted by the state and federal agencies having jurisdiction shall govern 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 District 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. Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site and 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 District and the Architect.

1.08 CONTRACTOR'S USE OF PREMISES

- A. If unoccupied and only with District'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 District chooses to beneficially occupy any building(s), Contractor must obtain the District'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 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 District or the Architect shall be permitted in the areas of work during demolition and construction activities.
- F. The Contractor shall install the construction fence and maintain that it will be locked when not in use. Keys to this fencing will be provided to the District.

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 District'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 District for disposition of same as indicated in the General Conditions.

1.10 UTILITY SHUTDOWNS AND INTERRUPTIONS

- A. Contractor shall give the District a minimum of <u>fourteen (14) calendar days</u> written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. The District will set exact time and duration for shutdown, and will assist Contractor with shutdown. Work required to reestablish utility services shall be performed by the Contractor.
- B. Contractor shall obtain District's written approval as indicated in the General Conditions in advance of deliveries of material or equipment or other activities that may conflict with District'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.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

Project Number

DOCUMENT 01 22 00

ALTERNATES AND UNIT PRICING

PART 1 - 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;
- **B.** Special Conditions;
- **C.** Bid Form and Proposal;
- **D.** Instruction to Bidders.

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 District subject to District'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 items 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 intention of 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

A. Racing Platforms

B. Competitive Starting Blocks

The above Alternate descriptions are general in nature and for reference purposes only. The Contract Documents, including, without limitation, the Drawings and Specifications, must be referred to for the complete scope of Work.

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PART 2 - [RESERVED]

END OF DOCUMENT

DOCUMENT 01 25 13 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;
- B. General Conditions, including, without limitation, Substitutions For Specified Items; and
- C. Special Conditions.

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 District 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. The District's Board has found and determined that certain item(s) shall be used on this Project based on the purpose(s) indicated pursuant to Public Contract Code section 3400(c). These findings, as well as the products and brand or trade names, have been identified in the Notice to Bidders.
- D. The Contractor will not be allowed to substitute specified items unless the request for substitution is submitted as follows:
 - (1) District must receive any notice of request for substitution of a specified item a minimum of ten (10) calendar days prior to bid opening.

Pool Deck Replacement Project Project Number: 23-006

- (2) Within 35 days after the date of the Notice of Award, the Contractor shall submit data substantiating the request(s) for all substitution(s) containing sufficient information to assess acceptability of product or system and impact on Project, including, without limitation, the requirements specified in the Special Conditions and the technical Specifications. Insufficient information shall be grounds for rejection of substitution.
- E. If the District 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 District and/or Architect to be unacceptable, the specified material or equipment shall be provided.
- F. Samples may be required. Tests required by the District 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 District.
- G. In reviewing the supporting data submitted for substitutions, the District 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 District will deduct the costs from the Contract Price. The Contractor shall be responsible for any re-design costs occasioned by District's acceptance and/or approval of any substitute.
- H. The Contractor shall, in the event that a substitute is less costly than that specified, credit the District 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. 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.
- In no event shall the District 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.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 01 26 00

CHANGES IN THE WORK

CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE PROVISIONS IN THE AGREEMENT, GENERAL CONDITIONS, AND SPECIAL CONDITIONS, IF USED, RELATED TO CHANGES AND/OR REQUESTS FOR CHANGES.

END OF DOCUMENT



Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 01 29 00

APPLICATION FOR PAYMENT AND CONDITIONAL AND UNCONDITIONAL WAIVER AND RELEASE FORMS

CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS IN THE GENERAL CONDITIONS RELATED TO APPLICATIONS FOR PAYMENT AND/OR PAYMENTS.

Pool Deck Replacement Project Project Number: 23-006

CONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

(CIVIL CODE SECTION 8132)

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Name of Clai	mant:
Name of Cus	tomer:
Job Location	: ,
Owner:	
Through Date	e:
Conditional	Waiver and Release
claimant has customer on or service pro that has been the claimant, below. This co	nt waives and releases lien, stop payment notice, and payment bond rights the for labor and service provided, and equipment and material delivered, to the this job through the Through Date of this document. Rights based upon labor ovided, or equipment or material delivered, pursuant to a written change orden fully executed by the parties prior to the date that this document is signed by are waived and released by this document, unless listed as an Exception document is effective only on the claimant's receipt of payment from the litution on which the following check is drawn:
Maker of Che	eck:
Amount of C	heck: \$
Check Payab	le to:
Exceptions	
This docume	nt does not affect any of the following:
(1)	Retentions.
(2)	Extras for which the claimant has not received payment.
(3)	The following progress payments for which the claimant has previously given a conditional waiver and release but has not received payment:
Date(s) of wa	aiver and release:
	f unpaid progress payment(s): \$ MMUNITY COLLEGE DISTRICT APPLICATION FOR PAYMENT AND CONDITIONAL AND UNCONDITIONAL

Pool Deck Replacement Project Project Number: 23-006

(4) Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.

Claimant's Signature:	
Claimant's Title:	
Date of Signature:	

SOLANO COMMUNITY COLLEGE DISTRICT

Pool Deck Replacement Project Project Number: 23-006

UNCONDITIONAL WAIVER AND RELEASE ON PROGRESS PAYMENT

(CIVIL CODE SECTION 8134)

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Name of Clai	mant:
Name of Cus	tomer:
Job Location	:
Owner:	
Through Dat	e:
Unconditio	nal Waiver and Release
claimant has customer on or service pr that has bee the claimant	nt waives and releases lien, stop payment notice, and payment bond rights the for labor and service provided, and equipment and material delivered, to the this job through the Through Date of this document. Rights based upon labor ovided, or equipment or material delivered, pursuant to a written change order n fully executed by the parties prior to the date that this document is signed by , are waived and released by this document, unless listed as an Exception claimant has received the following progress payment: \$
-	nt does not affect any of the following:
inis docume	nt does not affect any of the following:
(1)	Retentions.
(2)	Extras for which the claimant has not received payment.
(3)	Contract rights, including (A) a right based on rescission, abandonment, or breach of contract, and (B) the right to recover compensation for work not compensated by the payment.
Claimant's S	ignature:
Claimant's T	itle:
Date of Sign	ature:

SOLANO COMMUNITY COLLEGE DISTRICT

Pool Deck Replacement Project Project Number: 23-006

CONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

(CIVIL CODE SECTION 8136)

NOTICE: THIS DOCUMENT WAIVES THE CLAIMANT'S LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS EFFECTIVE ON RECEIPT OF PAYMENT. A PERSON SHOULD NOT RELY ON THIS DOCUMENT UNLESS SATISFIED THAT THE CLAIMANT HAS RECEIVED PAYMENT.

Name of Customer:		
Job Location:		
Owner:		
Conditional Waiver and Release		
This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. This document is effective only on the claimant's receipt of payment from the financial institution on which the following check is drawn:		
Maker of Check:		
Amount of Check: \$		
Check Payable to:		
Exceptions		
This document does not affect any of the following:		
Disputed claims for extras in the amount of: \$		
Claimant's Signature:		
Claimant's Title:		
Date of Signature:		

SOLANO COMMUNITY COLLEGE DISTRICT

Name of Claimant:

Pool Deck Replacement Project Project Number: 23-006

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paid

UNCONDITIONAL WAIVER AND RELEASE ON FINAL PAYMENT

(CIVIL CODE SECTION 8138)

NOTICE TO CLAIMANT: THIS DOCUMENT WAIVES AND RELEASES LIEN, STOP PAYMENT NOTICE, AND PAYMENT BOND RIGHTS UNCONDITIONALLY AND STATES THAT YOU HAVE BEEN PAID FOR GIVING UP THOSE RIGHTS. THIS DOCUMENT IS ENFORCEABLE AGAINST YOU IF YOU SIGN IT, EVEN IF YOU HAVE NOT BEEN PAID. IF YOU HAVE NOT BEEN PAID, USE A CONDITIONAL WAIVER AND RELEASE FORM.

Name of Customer:
Job Location:
Owner:
Unconditional Waiver and Release
This document waives and releases lien, stop payment notice, and payment bond rights the claimant has for all labor and service provided, and equipment and material delivered, to the customer on this job. Rights based upon labor or service provided, or equipment or material delivered, pursuant to a written change order that has been fully executed by the parties prior to the date that this document is signed by the claimant, are waived and released by this document, unless listed as an Exception below. The claimant has been pain full.
Exceptions
This document does not affect any of the following:
Disputed claims for extras in the amount of: \$
Claimant's Signature:
Claimant's Title:
Date of Signature:

SOLANO COMMUNITY COLLEGE DISTRICT

Name of Claimant:

DOCUMENT 01 31 19

PROJECT MEETINGS

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; and
- B. Special Conditions.

1.02 PROGRESS MEETINGS:

- A. Contractor 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) District Representative.
 - (2) Contractor.
 - (3) Contractor's Project Manager.
 - (4) Contractor's Superintendent.
 - (5) Subcontractors, as appropriate to the agenda of the meeting.
 - (6) Suppliers, as appropriate to the agenda of the meeting.
 - (7) Construction Manager, if any.
 - (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 District's, the Architect's, and/or an engineer's Consultants will attend at their discretion, in response to the agenda.
- E. The District representative, the Construction Manager, and/or another District Agent shall take and distribute meeting notes to attendees and other concerned parties. If exceptions are taken to anything in the meeting notes,

Pool Deck Replacement Project Project Number: 23-006

those exceptions shall be stated in writing to the District within five (5) working days following District's distribution of the meeting notes.

1.03 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.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

DOCUMENT 01 32 13

SCHEDULING OF WORK

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. Summary of Work; and
- D. Submittals.

1.02 SECTION INCLUDES

- A. Scheduling of Work under this Contract shall be performed by Contractor in accordance with requirements of this Section.
 - (1) Development of schedule, cost and resource loading of the schedule, monthly payment requests, and project status reporting requirements of the Contract shall employ computerized Critical Path Method ("CPM") scheduling ("CPM Schedule").
 - (2) CPM Schedule shall be cost loaded based on Schedule of Values as approved by District.
 - (3) Submit schedules and reports as specified in the General Conditions.
- B. Upon Award of Contract, Contractor shall immediately commence development of Initial and Original CPM Schedules to ensure compliance with CPM Schedule submittal requirements.

1.03 CONSTRUCTION SCHEDULE

- A. Within ten (10) days of issuance of the Notice to Proceed, and before request for first progress payment, the Contractor shall prepare and submit to the Project Manager a construction progress schedule conforming to the Milestone Schedule below.
- B. The Construction Schedule shall be continuously updated, and an updated schedule shall be submitted with each application for progress payment. Each revised schedule shall indicate the work actually accomplished during the previous period and the schedule for completion of the remaining work.

Pool Deck Replacement Project Project Number: 23-006

C. Milestone Schedule:

ACTIVITY DESCRIPTION

REQUIRED COMPLETION

• CONSTRUCTION STARTS JUNE 1st, 2023

• FINAL PROJECT COMPLETION OCTOBER 31st, 2023

1.04 QUALIFICATIONS

- A. Contractor shall employ experienced scheduling personnel qualified to use the latest version of [i.e., Primavera Project Planner]. Experience level required is set forth below. Contractor may employ such personnel directly or may employ a consultant for this purpose.
 - (1) The written statement shall identify the individual who will perform CPM scheduling.
 - (2) Capability and experience shall be verified by description of construction projects on which individual has successfully applied computerized CPM.
 - (3) Required level of experience shall include at least two (2) projects of similar nature and scope with value not less than three fourths (¾) of the Total Bid Price of this Project. The written statement shall provide contact persons for referenced projects with current telephone and address information.
- B. District reserves the right to approve or reject Contractor's scheduler or consultant at any time. District reserves the right to refuse replacing of Contractor's scheduler or consultant, if District believes replacement will negatively affect the scheduling of Work under this Contract.

1.05 GENERAL

- A. Progress Schedule shall be based on and incorporate milestone and completion dates specified in Contract Documents.
- B. Overall time of completion and time of completion for each milestone shown on Progress Schedule shall adhere to times in the Contract, unless an earlier (advanced) time of completion is requested by Contractor and agreed to by District. Any such agreement shall be formalized by a Change Order.
 - (1) District is not required to accept an early completion schedule, i.e., one that shows an earlier completion date than the Contract Time.
 - (2) Contractor shall not be entitled to extra compensation in event agreement is reached on an earlier completion schedule and Contractor completes its Work, for whatever reason, beyond completion date shown in its early completion schedule but within the Contract Time.

- (3) A schedule showing the work completed in less than the Contract Time, and that has been accepted by District, shall be considered to have Project Float. The Project Float is the time between the scheduled completion of the work and the Completion Date. Project Float is a resource available to both District and the Contractor.
- C. Ownership Project Float: Neither the District nor Contractor owns Project Float. The Project owns the Project Float. As such, liability for delay of the Completion Date rests with the party whose actions, last in time, actually cause delay to the Completion Date.
 - (1) For example, if Party A uses some, but not all of the Project Float and Party B later uses remainder of the Project Float as well as additional time beyond the Project Float, Party B shall be liable for the time that represents a delay to the Completion Date.
 - (2) Party A would not be responsible for the time since it did not consume the entire Project Float and additional Project Float remained; therefore, the Completion Date was unaffected by Party A.
- D. Progress Schedule shall be the basis for evaluating job progress, payment requests, and time extension requests. Responsibility for developing Contract CPM Schedule and monitoring actual progress as compared to Progress Schedule rests with Contractor.
- E. Failure of Progress Schedule to include any element of the Work, or any inaccuracy in Progress Schedule, will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. District's acceptance of schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests and shall not, in any manner, impose a duty of care upon District, or act to relieve Contractor of its responsibility for means and methods of construction.
- F. Software: Contractor to use a scheduling software approved by the District / Construction Manager. Such software shall be compatible with Windows operating system. Contractor shall transmit contract file to District on compact disk at times requested by District.
- G. Transmit each item under the form approved by District.
 - (1) Identify Project with District Contract number and name of Contractor.
 - (2) Provide space for Contractor's approval stamp and District's review stamps.
 - (3) Submittals received from sources other than Contractor will be returned to the Contractor without District's review.

1.06 INITIAL CPM SCHEDULE

- A. Initial CPM Schedule submitted for review at the pre-construction conference shall serve as Contractor's schedule for up to ninety (90) calendar days after the Notice to Proceed.
- B. Indicate detailed plan for the Work to be completed in first ninety (90) days of the Contract; details of planned mobilization of plant and equipment; sequence of early operations; procurement of materials and equipment. Show Work beyond ninety (90) calendar days in summary form.
- C. Initial CPM Schedule shall be time scaled.
- D. Initial CPM Schedule shall be cost and resource loaded. Accepted cost and resource loaded schedule will be used as basis for monthly progress payments until acceptance of the Original CPM Schedule. Use of Initial CPM Schedule for progress payments shall not exceed ninety (90) calendar days.
- E. District and Contractor shall meet to review and discuss the Initial CPM Schedule within seven (7) calendar days after it has been submitted to District.
 - (1) District's review and comment on the schedule shall be limited to Contract conformance (with sequencing, coordination, and milestone requirements).
 - (2) Contractor shall make corrections to schedule necessary to comply with Contract requirements and shall adjust schedule to incorporate any missing information requested by District. Contractor shall resubmit Initial CPM Schedule if requested by District.
- F. If, during the first ninety (90) days after Notice to Proceed, the Contractor is of the opinion that any of the Work included on its Initial CPM Schedule has been impacted, the Contractor shall submit to District a written Time Impact Evaluation ("TIE") in accordance with Article 1.12 of this Section. The TIE shall be based on the most current update of the Initial CPM Schedule.

1.07 ORIGINAL CPM SCHEDULE

- A. Submit a detailed proposed Original CPM Schedule presenting an orderly and realistic plan for completion of the Work in conformance with requirements as specified herein.
- B. Progress Schedule shall include or comply with following requirements:
 - (1) Time scaled, cost and resource (labor and major equipment) loaded CPM schedule.
 - (2) No activity on schedule shall have duration longer than fifteen (15) work days, with exception of submittal, approval, fabrication and procurement activities, unless otherwise approved by District.

- (a) Activity durations shall be total number of actual work days required to perform that activity.
- (3) The start and completion dates of all items of Work, their major components, and milestone completion dates, if any.
- (4) District furnished materials and equipment, if any, identified as separate activities.
- (5) Activities for maintaining Project Record Documents.
- (6) Dependencies (or relationships) between activities.
- (7) Processing/approval of submittals and shop drawings for all material and equipment required per the Contract. Activities that are dependent on submittal acceptance or material delivery shall not be scheduled to start earlier than expected acceptance or delivery dates.
 - (a) Include time for submittals, re-submittals and reviews by District. Coordinate with accepted schedule for submission of Shop Drawings, samples, and other submittals.
 - (b) Contractor shall be responsible for all impacts resulting from resubmittal of Shop Drawings and submittals.
- (8) Procurement of major equipment, through receipt and inspection at jobsite, identified as separate activity.
 - (a) Include time for fabrication and delivery of manufactured products for the Work.
 - (b) Show dependencies between procurement and construction.
- (9) Activity description; what Work is to be accomplished and where.
- (10) The total cost of performing each activity shall be total of labor, material, and equipment, excluding overhead and profit of Contractor. Overhead and profit of the General Contractor shall be shown as a separate activity in the schedule. Sum of cost for all activities shall equal total Contract value.
- (11) Resources required (labor and major equipment) to perform each activity.
- (12) Responsibility code for each activity corresponding to Contractor or Subcontractor responsible for performing the Work.
- (13) Identify the activities which constitute the controlling operations or critical path. No more than twenty-five (25%) of the activities shall be critical or near critical. Near critical is defined as float in the range of one (1) to (10) days.

Pool Deck Replacement Project Project Number: 23-006

- (14) Twenty (20) workdays for developing punch list(s), completion of punch-list items, and final clean-up for the Work or any designated portion thereof. No other activities shall be scheduled during this period.
- (15) Interface with the work of other contractors, District, and agencies such as, but not limited to, utility companies.
- (16) Show detailed Subcontractor Work activities. In addition, furnish copies of Subcontractor schedules upon which CPM was built.
 - (a) Also furnish for each Subcontractor, as determined by District, submitted on Subcontractor letterhead, a statement certifying that Subcontractor concurs with Contractor's Original CPM Schedule and that Subcontractor's related schedules have been incorporated, including activity duration, cost and resource loading.
 - (b) Subcontractor schedules shall be independently derived and not a copy of Contractor's schedule.
 - (c) In addition to Contractor's schedule and resource loading, obtain from electrical, mechanical, and plumbing Subcontractors, and other Subcontractors as required by District, productivity calculations common to their trades, such as units per person day, feet of pipe per day per person, feet of wiring per day per person, and similar information.
 - (d) Furnish schedule for Contractor/Subcontractor CPM schedule meetings which shall be held prior to submission of Original CPM schedule to District. District shall be permitted to attend scheduled meetings as an observer.
- (17) Activity durations shall be in Work days.
- (18) Submit with the schedule a list of anticipated non-Work days, such as weekends and holidays. The Progress Schedule shall exclude in its Work day calendar all non-Work days on which Contractor anticipates critical Work will not be performed.
- C. Original CPM Schedule Review Meeting: Contractor shall, within sixty (60) days from the Notice to Proceed date, meet with District to review the Original CPM Schedule submittal.
 - (1) Contractor shall have its Project Manager, Project Superintendent, Project Scheduler, and key Subcontractor representatives, as required by District, in attendance. The meeting will take place over a continuous one (1) day period.
 - (2) District's review will be limited to submittal's conformance to Contract requirements including, but not limited to, coordination requirements. However, review may also include:

- (a) Clarifications of Contract Requirements.
- (b) Directions to include activities and information missing from submittal.
- (c) Requests to Contractor to clarify its schedule.
- (3) Within five (5) days of the Schedule Review Meeting, Contractor shall respond in writing to all questions and comments expressed by District at the Meeting.

1.08 ADJUSTMENTS TO CPM SCHEDULE

- A. Adjustments to Original CPM Schedule: Contractor shall have adjusted the Original CPM Schedule submittal to address all review comments from original CPM Schedule review meeting and resubmit network diagrams and reports for District's review.
 - (1) District, within ten (10) days from date that Contractor submitted the revised schedule, will either:
 - (a) Accept schedule and cost and resource loaded activities as submitted, or
 - (b) Advise Contractor in writing to review any part or parts of schedule which either do not meet Contract requirements or are unsatisfactory for District to monitor Project's progress, resources, and status or evaluate monthly payment request by Contractor.
 - (2) District may accept schedule with conditions that the first monthly CPM Schedule update be revised to correct deficiencies identified.
 - (3) When schedule is accepted, it shall be considered the "Original CPM Schedule" which will then be immediately updated to reflect the current status of the work.
 - (4) District reserves right to require Contractor to adjust, add to, or clarify any portion of schedule which may later be discovered to be insufficient for monitoring of Work or approval of partial payment requests. No additional compensation will be provided for such adjustments, additions, or clarifications.
- B. Acceptance of Contractor's schedule by District will be based solely upon schedule's compliance with Contract requirements.
 - (1) By way of Contractor assigning activity durations and proposing sequence of Work, Contractor agrees to utilize sufficient and necessary management and other resources to perform work in accordance with the schedule.

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- (2) Upon submittal of schedule update, updated schedule shall be considered "current" CPM Schedule.
- (3) Submission of Contractor's schedule to District shall not relieve Contractor of total responsibility for scheduling, sequencing, and pursuing Work to comply with requirements of Contract Documents, including adverse effects such as delays resulting from ill-timed Work.
- C. Submittal of Original CPM Schedule, and subsequent schedule updates, shall be understood to be Contractor's representation that the Schedule meets requirements of Contract Documents and that Work shall be executed in sequence indicated on the schedule.
- D. Contractor shall distribute Original CPM Schedule to Subcontractors for review and written acceptance, which shall be noted on Subcontractors' letterheads to Contractor and transmitted to District for the record.

1.09 MONTHLY CPM SCHEDULE UPDATE SUBMITTALS

- A. Following acceptance of Contractor's Original CPM Schedule, Contractor shall monitor progress of Work and adjust schedule each month to reflect actual progress and any anticipated changes to planned activities.
 - (1) Each schedule update submitted shall be complete, including all information requested for the Original CPM Schedule submittal.
 - (2) Each update shall continue to show all Work activities including those already completed. These completed activities shall accurately reflect "as built" information by indicating when activities were actually started and completed.
- B. A meeting will be held on approximately the twenty-fifth (25th) of each month to review the schedule update submittal and progress payment application.
 - (1) At this meeting, at a minimum, the following items will be reviewed: Percent (%) complete of each activity; Time Impact Evaluations for Change Orders and Time Extension Request; actual and anticipated activity sequence changes; actual and anticipated duration changes; and actual and anticipated Contractor delays.
 - (2) These meetings are considered a critical component of overall monthly schedule update submittal and Contractor shall have appropriate personnel attend. At a minimum, these meetings shall be attended by Contractor's General Superintendent and Scheduler.
 - (3) Contractor shall plan on the meeting taking no less than four (4) hours.
- C. Within five (5) working days after monthly schedule update meeting, Contractor shall submit the updated CPM Schedule update.

- D. Within five (5) work days of receipt of above noted revised submittals, District will either accept or reject monthly schedule update submittal.
 - (1) If accepted, percent (%) complete shown in monthly update will be basis for Application for Payment by the Contractor. The schedule update shall be submitted as part of the Contractor's Application for Payment.
 - (2) If rejected, update shall be corrected and resubmitted by Contractor before the Application for Payment is submitted.
- E. Neither updating, changing or revising of any report, curve, schedule, or narrative submitted to District by Contractor under this Contract, nor District's review or acceptance of any such report, curve, schedule or narrative shall have the effect of amending or modifying in any way the Completion Date or milestone dates or of modifying or limiting in any way Contractor's obligations under this Contract.

1.10 SCHEDULE REVISIONS

- A. Updating the Schedule to reflect actual progress shall not be considered revisions to the Schedule. Since scheduling is a dynamic process, revisions to activity durations and sequences are expected on a monthly basis.
- B. To reflect revisions to the Schedule, the Contractor shall provide District with a written narrative with a full description and reasons for each Work activity revised. For revisions affecting the sequence of work, the Contractor shall provide a schedule diagram which compares the original sequence to the revised sequence of work. The Contractor shall provide the written narrative and schedule diagram for revisions two (2) working days in advance of the monthly schedule update meeting.
- C. Schedule revisions shall not be incorporated into any schedule update until the revisions have been reviewed by District. District may request further information and justification for schedule revisions and Contractor shall, within three (3) days, provide District with a complete written narrative response to District's request.
- D. If the Contractor's revision is still not accepted by District, and the Contractor disagrees with District's position, the Contractor has seven (7) calendar days from receipt of District's letter rejecting the revision to provide a written narrative providing full justification and explanation for the revision. The Contractor's failure to respond in writing within seven (7) calendar days of District's written rejection of a schedule revision shall be contractually interpreted as acceptance of District's position, and the Contractor waives its rights to subsequently dispute or file a claim regarding District's position.
- E. At District's discretion, the Contractor can be required to provide Subcontractor certifications of performance regarding proposed schedule revisions affecting said Subcontractors.

1.11 RECOVERY SCHEDULE

- A. If the Schedule Update shows a completion date twenty-one (21) calendar days beyond the Contract Completion Date, or individual milestone completion dates, the Contractor shall submit to District the proposed revisions to recover the lost time within seven (7) calendar days. As part of this submittal, the Contractor shall provide a written narrative for each revision made to recapture the lost time. If the revisions include sequence changes, the Contractor shall provide a schedule diagram comparing the original sequence to the revised sequence of work.
- B. The revisions shall not be incorporated into any schedule update until the revisions have been reviewed by District.
- C. If the Contractor's revisions are not accepted by District, District and the Contractor shall follow the procedures in paragraph 1.09.C, 1.09.D and 1.09.E above.
- D. At District's discretion, the Contractor can be required to provide Subcontractor certifications for revisions affecting said Subcontractors.

1.12 TIME IMPACT EVALUATION ("TIE") FOR CHANGE ORDERS, AND OTHER DELAYS

- A. When Contractor is directed to proceed with changed Work, the Contractor shall prepare and submit within fourteen (14) calendar days from the Notice to Proceed a TIE which includes both a written narrative and a schedule diagram depicting how the changed Work affects other schedule activities. The schedule diagram shall show how the Contractor proposes to incorporate the changed Work in the schedule and how it impacts the current schedule-update critical path. The Contractor is also responsible for requesting time extensions based on the TIE's impact on the critical path. The diagram must be tied to the main sequence of schedule activities to enable District to evaluate the impact of changed Work to the scheduled critical path.
- B. Contractor shall be required to comply with the requirements of Paragraph 1.09.A for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.
- C. Contractor shall be responsible for all costs associated with the preparation of TIEs, and the process of incorporating them into the current schedule update. The Contractor shall provide District with four (4) copies of each TIE.
- D. Once agreement has been reached on a TIE, the Contract Time will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Time may be extended in an amount District allows, and the Contractor may submit a claim for additional time claimed by contractor.

1.13 TIME EXTENSIONS

- A. The Contractor is responsible for requesting time extensions for time impacts that, in the opinion of the Contractor, impact the critical path of the current schedule update. Notice of time impacts shall be given in accord with the General Conditions.
- B. Where an event for which District is responsible impacts the projected Completion Date, the Contractor shall provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. The Contractor shall also include a detailed cost breakdown of the labor, equipment, and material the Contractor would expend to mitigate District-caused time impact. The Contractor shall submit its mitigation plan to District within fourteen (14) calendar days from the date of discovery of the impact. The Contractor is responsible for the cost to prepare the mitigation plan.
- C. Failure to request time, provide TIE, or provide the required mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.
- D. No time will be granted under this Contract for cumulative effect of changes.
- E. District will not be obligated to consider any time extension request unless the Contractor complies with the requirements of Contract Documents.
- F. Failure of the Contractor to perform in accordance with the current schedule update shall not be excused by submittal of time extension requests.
- G. If the Contractor does not submit a TIE within the required fourteen (14) calendar days for any issue, it is mutually agreed that the Contractor does not require a time extension for said issue.

1.14 SCHEDULE REPORTS

- A. Submit four (4) copies of the following reports with the Initial CPM Schedule, the Original CPM Schedule, and each monthly update.
- B. Required Reports:
 - (1) Two activity listing reports: one sorted by activity number and one by total Project Float. These reports shall also include each activity's early/late and actual start and finish dates, original and remaining duration, Project Float, responsibility code, and the logic relationship of activities.
 - (2) Cost report sorted by activity number including each activity's associated cost, percentage of Work accomplished, earned value- to date, previous payments, and amount earned for current update period.

- (3) Schedule plots presenting time-scaled network diagram showing activities and their relationships with the controlling operations or critical path clearly highlighted.
- (4) Cash flow report calculated by early start, late start, and indicating actual progress. Provide an exhibit depicting this information in graphic form.
- Planned versus actual resource (i.e., labor) histogram calculated by (5) early start and late start.

C. Other Reports:

In addition to above reports, District may request, from month to month, any two of the following reports. Submit four (4) copies of all reports.

- (1) Activities by early start.
- (2) Activities by late start.
- (3) Activities grouped by Subcontractors or selected trades.
- (4) Activities with scheduled early start dates in a given time frame, such as fifteen (15) or thirty (30) day outlook.
- D. Furnish District with report files on compact disks containing all schedule files for each report generated.

PROJECT STATUS REPORTING 1.15

- Α. In addition to submittal requirements for CPM scheduling identified in this Section, Contractor shall provide a monthly project status report (i.e., written narrative report) to be submitted in conjunction with each CPM Schedule as specified herein. Status reporting shall be in form specified below.
- В. Contractor shall prepare monthly written narrative reports of status of Project for submission to District. Written status reports shall include:
 - (1)Status of major Project components (percent (%) complete, amount of time ahead or behind schedule) and an explanation of how Project will be brought back on schedule if delays have occurred.
 - (2) Progress made on critical activities indicated on CPM Schedule.
 - (3) Explanations for any lack of work on critical path activities planned to be performed during last month.
 - (4) Explanations for any schedule changes, including changes to logic or to activity durations.
 - (5) List of critical activities scheduled to be performed next month.

- (6) Status of major material and equipment procurement.
- (7) Any delays encountered during reporting period.
- (8) Contractor shall provide printed report indicating actual versus planned resource loading for each trade and each activity. This report shall be provided on weekly and monthly basis.
 - (a) Actual resource shall be accumulated in field by Contractor, and shall be as noted on Contractor's daily reports. These reports will be basis for information provided in computer-generated monthly and weekly printed reports.
 - (b) Contractor shall explain all variances and mitigation measures.
- (9) Contractor may include any other information pertinent to status of Project. Contractor shall include additional status information requested by District at no additional cost.
- (10) Status reports, and the information contained therein, shall not be construed as claims, notice of claims, notice of delay, or requests for changes or compensation.

1.16 WEEKLY SCHEDULE REPORT

At the Weekly Progress Meeting, the Contractor shall provide and present a time-scaled three (3) week look-ahead schedule that is based and correlated by activity number to the current schedule (i.e., Initial, Original CPM, or Schedule Update).

1.17 DAILY CONSTRUCTION REPORTS

On a daily basis, Contractor shall submit a daily activity report to District for each workday, including weekends and holidays when worked. Contractor shall develop the daily construction reports on a computer-generated database capable of sorting daily Work, manpower, and man-hours by Contractor, Subcontractor, area, subarea, and Change Order Work. Upon request of District, furnish computer disk of this data base. Obtain District's written approval of daily construction report data base format prior to implementation. Include in report:

- A. Project name and Project number.
- B. Contractor's name and address.
- C. Weather, temperature, and any unusual site conditions.
- D. Brief description and location of the day's scheduled activities and any special problems and accidents, including Work of Subcontractors. Descriptions shall be referenced to CPM scheduled activities.
- E. Worker quantities for its own Work force and for Subcontractors of any tier.
- F. Equipment, other than hand tools, utilized by Contractor and Subcontractors.

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1.18 PERIODIC VERIFIED REPORTS

Contractor shall complete and verify construction reports on a form prescribed by the Division of the State Architect and file reports on the first day of February, May, August, and November during the preceding quarter year; at the completion of the Contract; at the completion of the Work; at the suspension of Work for a period of more than one (1) month; whenever the services of Contractor or any of Contractor's Subcontractors are terminated for any reason; and at any time a special verified report is required by the Division of the State Architect. Refer to section 4-336 and section 4-343 of Part 1, Title 24 of the California Code of Regulations.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

DOCUMENT 01 33 00

SUBMITTALS

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, Contractor's Submittals and Schedules, Drawings and Specifications;
- B. Special Conditions.

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.
- "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, indicated 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 instructions, the Contractor shall procure and distribute copies of these to the District, 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 District, the Architect, the Project Inspector, 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 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. Also certify that Contractor-furnished equipment can be installed in allocated space. In event of any variance, Contractor shall specifically state in transmittal and on Shop Drawings, portions vary and require approval of a substitute. Submittals shall not be used as a means of requesting a substitution.
- (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 District, 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 the its proposed construction schedule and submit both to the District 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 District.
- (2) Contractor is responsible for all lost time should the initial submittal be rejected, marked "revise and resubmit", etc.
- (3) All Submittals shall be forwarded to the District 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 District so as not to delay the Construction Schedule.
- (4) Contractor may be assessed \$100 a day for each day it is late in submitting a shop drawing or sample. No extensions of time will be granted to Trade Contractor or any Subcontractor because of its failure to have shop drawings and samples submitted in accordance with the Schedule.

1.03 SHOP DRAWINGS:

- A. Contractor shall submit one reproducible transparency and six (6) opaque reproductions. The District will review and return the reproducible copy and one (1) opaque reproduction 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. District shall not review Shop Drawings for quantities of materials or number of items supplied.
- F. District's and/or Architect's review of Shop Drawing will be general. District and/or Architect review does not relieve Contractor of responsibility for dimensions, accuracy, proper fitting, construction of Work, furnishing of materials, or Work required by Contract Documents and not indicated on Shop Drawings. The District's and/or Architect's review of Shop Drawings 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 District 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 District, the Architect, the Project Inspector, 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) Specification number and description.
 - (3) Architect's name and project number.
 - (4) Shop Drawing title, number, date, and scale.
 - (5) Names of Contractor, Subcontractor(s) and fabricator.
 - (6) Working and erection dimensions.
 - (7) Arrangements and sectional views.

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- (8) Necessary details, including complete information for making connections with other Work.
- (9) Kinds of materials and finishes.
- (10) 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 all submittal(s) before submitting them for final review.

1.04 PRODUCT DATA OR NON REPRODUCIBLE SUBMITTALS:

- A. Contractor shall submit manufacturer's printed literature in original form. Any fading type of reproduction will not be accepted. Contract must submit a minimum of six (6) each, to the District. District shall return one (1) to the Contractor, who shall reproduce whatever additional copies it requires for distribution.
- B. Contractor shall submit six (6) copies of a complete list 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.

E. Imported Materials Certification must be submitted at least ten (10) days before material is delivered.

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 four (4) 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 District in writing to this effect.
- D. Samples to be shipped prepaid or hand-delivered to the District.
- 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 District'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. District's 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 District's direction:

(1) Size: As Specified.

(2) Furnish catalog numbers and similar data, as requested.

1.06 REVIEW AND RESUBMISSION REQUIREMENTS:

- A. The District 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) days 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. Such resubmittal shall not delay the Work.
- 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 District 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 District 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. District's and/or Architect's review of Shop Drawings does not relieve the Contractor of responsibility for any errors that may exist. Contractor is

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responsible for the dimensions and design of adequate connections and details and for satisfactory construction of all the Work.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

DOCUMENT 01 35 13.23

SITE STANDARDS

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 Regulations;
- B. Special Conditions;
- C. Drug-Free Workplace Certification;
- Tobacco-Free Environment Certification;
- E. Criminal Background Investigation/Fingerprinting Certification;
- F. Temporary Facilities and Controls.

1.02 REQUIREMENTS OF THE DISTRICT:

- A. Drug-Free Schools and Safety Requirements:
 - (1) All school sites and other District Facilities have been declared "Drug-Free Zones." No drugs, alcohol and/or smoking are allowed at any time in any buildings and/or grounds on District property. No students, staff, visitors, or contractors are to use drugs on these sites.
 - (2) Smoking and the use of tobacco products by all persons is prohibited on or in District property. District property includes school buildings, school grounds, school-owned vehicles and vehicles owned by others while on District property. Contractor shall post: "Non-Smoking Area" in a highly visible location in each work area, staging area, and parking area. Contractor may designate a smoking area outside of District property within the public right-of-way, provided that this area remains quiet and unobtrusive to adjacent neighbors. This smoking area is to be kept clean at all times.
 - (3) Contractor shall ensure that no alcohol, firearms, weapons, or controlled substances enter or are used at the Site. Contractor shall immediately remove from the Site and terminate the employment of any employee(s) found in violation of this provision.
- B. Language: Profanity or other unacceptable and/or loud language will not be tolerated, "Cat calls" or other derogatory language toward students, staff, volunteers, parents or public will not be allowed.

- (1) Contractor shall observe the noise ordinance of the Site at all times including, without limitation, all applicable local, city, and/or state laws, ordinances, and/or regulations regarding noise and allowable noise levels.
- (2) The use of radios, etc., shall be controlled to keep all sound at a level that cannot be heard beyond the immediate area of use. District reserves the right to prohibit the use of radios at the Site, except for mobile phones or other handheld communication radios.
- (3) If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

D. Traffic:

- (1) Driving on the Premises shall be limited to periods when students and public are not present. If driving or deliveries must be made during the school hours, two (2) or more ground guides shall lead the vehicle across the area of travel. In no case shall driving take place across playgrounds or other pedestrian paths during recess, lunch, and/or class period changes. The speed limit on-the Premises shall be five (5) miles per hour (maximum) or less if conditions require.
- (2) All paths of travel for deliveries, including without limitation, material, equipment, and supply deliveries, shall be reviewed and approved by District in advance. Any damage will be repaired to the pre-damaged condition by the Contractor.
- (3) District shall designate a construction entry to the Site. If Contractor requests, District determines it is required, and to the extent possible, District shall designate a staging area so as not to interfere with the normal functioning of school facilities. Location of gates and fencing shall be approved in advance with District and at Contractor's expense.
- (4) Parking areas shall be reviewed and approved by District in advance.

 No parking is to occur under the drip line of trees or in softscape areas that could otherwise be damaged.
- E. All of the above shall be observed and complied with by the Contractor and all workers on the Site. Failure to follow these directives could result in individual(s) being suspended or removed from the work force at the discretion of the District. The same rules and regulations shall apply equally to delivery personnel, inspectors, consultants, and other visitors to the Site.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

DOCUMENT 01 41 00

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, including, without limitation, Obtaining of Permits, Licenses and Registrations and Work to Comply with All Applicable Laws and Regulations;
- B. Special Conditions; and
- C. Quality Control.

1.02 DESCRIPTION:

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 over 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 District and/or Architect may request, including, without limitation, applicable portions of the California Code of Regulations ("CCR").
 - (1) California Building Standards Administrative Code, Part 1, Title 24, CCR.
 - (2) California Building Code (CBC), Part 2, Title 24, CCR; (International Building Code volumes 1-2 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; (International Fire Code and California Amendments).
- (7) California Green Building Standards Code (CALGreen), Part 11, Title 24, CCR.
- (8) California Referenced Standards Code, Part 12, Title 24, CCR.
- (9) State Fire Marshal Regulations, Public Safety, Title 19, CCR.
- (10) Partial List of Applicable National Fire Protection Association (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) NFPA 2001 Clean Agent Fire Extinguishing Systems.
- (11) California Division of the State Architect interpretation of Regulations ("DSA IR"), including, without limitation:
 - (a) DSA IR A-6 Construction Change Document Submittal and Approval Processes.
 - (b) DSA IR A-7 Project Inspector Certification and Approval.
 - (c) DSA IR A-8 Project Inspector and Assistant Inspector Duties and Performance.
 - (d) DSA IR A-12 Assistant Inspector Approval.
- (12) DSA Procedures ("DSA PR")
 - (a) DSA PR 13-01 Construction Oversight Process
- (13) DSA PR 13-02 Project Certification Process
- B. This Project shall be governed by applicable regulations, including, without limitation, the State of California's Administrative Regulations for the Division of the State Architect-Structural Safety (DSA/SS), Chapter 4, Part 1, Title 24, CCR, and the most current version on the date the bids are opened and as it pertains to school construction including, without limitation:

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- (1) Test and testing laboratory per Section 4-335. District shall pay for the testing laboratory.
- (2) Special inspections per Section 4-333(c).
- (3) Deferred Approvals per section 4-317(g).
- (4) Verified reports per Sections 4-336 & 4-343(c).
- (5) Duties of the Architect & Engineers shall be per Section 4-333(a) and 4-341.
- (6) Duties of the Contractor shall be per Section 4-343.
- (7) Duties of Project Inspector shall be per Section 4-334.
- (8) Addenda and Construction Change Documents per Section 4-338.

Contractor shall keep and make available all applicable parts of the most current version of Title 24 referred to in the plans and specifications at the Site during construction.

- C. Items of deferred approval shall be clearly marked on the first sheet of the Architect's and/or Engineer's approved Drawings. All items later submitted for approval shall be per Title 24 requirements to the DSA.
 - (1) Contractor shall submit the following to Architect for review and endorsement:
 - (a) Product information on proposed material/system supplier.
 - (b) Drawings, specifications, and calculations prepared, signed, and stamped by an architect or engineer licensed in the State of California for that portion of the Work.
 - (c) All other requirements as may be required by DSA.
 - (2) Cost of preparing and submitting documentation per DSA Deferred Approval requirements including required modifications to Drawings and Specifications, whether or not indicated in the Contract Documents, shall be borne by Contractor.
 - (3) Contractor shall not begin fabrication and installation of deferred approval items without first obtaining DSA approval of Drawings and Specifications.
 - (4) Schedule of Work Subject to DSA Deferred Approval: Window wall systems exceeding 10 feet in span.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

DOCUMENT 01 42 13

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.	AASHTO	American Association of State Highway and
		Transportation Officials
3.	ABPA	Acoustical and Board Products Association
4.	ACI	American Concrete Institute
5.	AGA	American Gas Association
6.	AGC	Associated General Contractors
7.	AHC	Architectural Hardware Consultant
8.	AHRI	Air Conditioning, Heating, Refrigeration Institute
9.	ΑI	Asphalt Institute
10.	AIA	American Institute of Architects
11.	AISC	American Institute of Steel Construction
12.	AISI	American Iron and Steel Institute
	AMCA	Air Movement and Control Association
	ANSI	American National Standards Institute
	APA	APA – The Engineered Wood Association
16.	ASCE	American Society of Civil Engineers
17.	ASHRAE	American Society of Heating, Refrigeration and
		Air Conditioning Engineers
18.	ASSE	American Society of Civil Engineers
	ASME	American Society of Mechanical Engineers
20.	ASTM	American Society of Testing and Materials
		International
21.	AWPA	American Wood Protection Association
22.		American Wood Preservers Institute
	AWS	American Welding Society
	AWSC	American Welding Society Code
25.	AWI	Architectural Woodwork Institute
26.	AWWA	American Water Works Association

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27.	BIA	The Brick Industry Association
28.	CCR	California Code of Regulations
29.	CLFMI	Chain Link Fence Manufacturers Institute
30.	CRA	California Redwood Association
31.	CRSI	Concrete Reinforcing Steel Institute
32.	CS	Commercial Standards
	CSI	Construction Specifications Institute
34.	CTI	Cooling Technology Institute
	FGIA	Fenestration and Glazing Industry Alliance
	FGMA	Flat Glass Manufacturers' Association
	FIA	Factory Insurance Association
38.		Factory Mutual Global
39.	•	Federal Specification
40	SPEC	Facing Title Institute
40.		Facing Title Institute
41. 42.	GA IAPMO	Gypsum Association
42.	IAPMO	International Association of Plumbing and Mechanical Officials
43.	ICC	International Code Council
44.	IEEE	Institute of Electrical and Electronics Engineers
45.		Illuminating Engineering Society
	MCAC	Mason Contractors Association of California
47.	MIMA	Mineral Wool Insulation Manufacturers
.,.	1 121 17 (Association
48.	MLMA	Metal Lath Manufacturers Association
49.	MS/MIL	Military Specifications
	SPEC	, , , , , , , , , , , , , , , , , , , ,
50.	NAAMM	National Association of Architectural Metal
		Manufacturers
51.	NBHA	National Builders Hardware Association
52.		National Concrete Masonry Association
53.	NCSEA	National Council of Structural Engineers
		Associations
54.	NEC	National Electrical Code
55.	NEMA	National Electrical Manufacturers Association
56.	NIST	National Institute of Standards and Technology
57.	NSI	Natural Stone Institute
58.	NTMA	National Terrazzo and Mosaic Association, Inc.
59.	ORS	Office of Regulatory Services (California)
60.	OSHA	Occupational Safety and Health Act
61. 62.	PCI PCA	Precast/Prestressed Concrete Institute Portland Cement Association
63.	PCA	Painting Contractors Association
64.	PDI	Plumbing Drainage Institute
65.	PEI	Porcelain Enamel Institute, Inc.
66.	PG&E	Pacific Gas & Electric Company
67.	PS	Product Standards
68.	SDI	Steel Door Institute; Steel Deck Institute
69.	SJI	Steel Joist Institute
70.	SPC	Society for Protective Coatings
71.	TCNA	Tile Council of North America, Inc.
72.	TPI	Truss Plate Institute

73.	UBC	Uniform Building Code
74.	UL	Underwriters Laboratories Code
75.	UMC	Uniform Mechanical Code
76.	USDA	United States Department of Agriculture
77.	VI	Vermiculite Institute
78.	WCLIB	West Coast Lumber Inspection Bureau
79.	WDMA	Window and Door Manufacturers Association
80.	WEUSER	Western Electric Utilities Service Engineering
		Requirements
81.	WIC	Woodwork Institute of California

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.



Project Number: 23-006

DOCUMENT 01 42 16

DEFINITIONS

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 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 District 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.



Pool Deck Replacement Project Project Number: 23-006

DOCUMENT 01 42 19 REFERENCES

PART 1 - GENERAL

1.01 1.01 SCHEDULE OF REFERENCES:

The following information is intended only for the general assistance of the Contractor, and the District does not represent that all of the information is current. It is the Contractor's responsibility to verify the correct information for each of the entities listed.

AA	Aluminum Association 1525 Wilson Blvd., Suite 600 Arlington, VA 22209 www.aluminum.org	703/358-2960
AABC	Associated Air Balance Council 1518 K Street, NW, Suite 503 Washington, DC 20005 www.aabchq.com	202/737-0202
AASHTO	American Association of State Highway and Transportation Officials 555 12th St. NW - Suite 1000 Washington, DC 20004 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 Ave., NW, Suite 300 West Washington, DC 20001 www.paint.org	202/462-6272
ACI	American Concrete Institute 38800 Country Club Dr. Farmington Hills, MI 48331-3439 www.aci-int.org	248/848-3700
ACPA	American Concrete Pipe Association 8445 Freeport Parkway, Suite 350 Irving, TX 75063-2595 www.concrete-pipe.org	972/506-7216

ADC	Air Duct Council 1901 N. Roselle Road, Suite 800 Schaumburg, IL 60195 www.flexibleduct.org	847/706-6750
AF&PA	American Forest and Paper Association 1111 Nineteenth Street, NW, Suite 800 Washington, DC 20036 www.afandpa.org	202/463-2700
AGA	American Gas Association 400 North Capitol Street, NW Washington, DC 20001 www.aga.org	202/824-7000
AGC	Associate General Contractors of America 2300 Wilson Blvd., Suite 400 Arlington, VA 22201 www.agc.org	703/548-3118
АНА	American Hardboard Association 1210 West Northwest Highway Palatine, IL 60067 http://domensino.com/AHA/default.htm	847/934-8800
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 Ave., NW Washington, DC 20006-5292 www.aia.org	202/626-7300
AISC	American Institute of Steel Construction One East Wacker Drive Suite 700 Chicago, IL 60601-1802 www.aisc.org	312/670-2400
AISI	American Iron and Steel Institute 25 Massachusetts Ave., NW, Suite 800 Washington, DC 20001 www.steel.org	202/452-7100
AITC	American Institute of Timber Construction 7012 S. Revere Parkway Suite 140 Centennial, CO 80112 https://www.plib.org/aitc/	303/792-9559

ALI	Associated Laboratories, Inc. P.O. Box 152837 Dallas, TX 75315 www.assoc-labs.com	214/565-0593
ALSC	American Lumber Standards Committee, Inc. P.O. Box 210 Germantown, MD 20875 www.alsc.org	301/972-1700
AMCA	Air Movement and Control Association International, Inc. 30 W. University Drive Arlington Heights, IL 60004 www.amca.org	847/394-0150
AMPP (formerly SSPC)	Association for Materials Protection and Performance (merger of Society for Protective Coatings and National Association of Corrosion Engineers International) (formerly Steel Structures Painting Council) 800 Trumbull Drive Pittsburgh, PA 15205 www.sspc.org	412/281-2331 877/281-7772
ANLA	AmericanHort (merger of American Nursery & Landscape Association and OFA – The Association of Horticultural Professionals) 2130 Stella Court Columbus, OH 43215 www.americanhort.org	614/487-1117
ANSI	American National Standards Institute 1899 L Street, NW, 11th Floor Washington, DC 20036 www.ansi.org	202/293-8020
APA	APA-The Engineered Wood Association 7011 S. 19th Street Tacoma, WA 98466-5333 www.apawood.org	253/565-6600

APA	Architectural Precast Association 325 John Knox Rd, Suite L-103 Tallahassee, FL 32303 www.archprecast.org	850/205-5637
APCIA	American Property Casualty Insurance Association (merger of American Insurance Association (formerly the National Board of Fire Underwriters) with the Property Casualty Insurers Association of America) 555 12th St, NW, Suite 550 Washington DC 20004 www.apci.org	202/828-7100
AHRI	Air Conditioning and Refrigeration Institute 4100 N. Fairfax Drive, Suite 200 Arlington, VA 22203 www.lightindustries.com/ARI	703/524-8800
ARMA	Asphalt Roofing Manufacturers Association 2331 Rock Spring Road Forest Hill, MD 21050 www.asphaltroofing.org	443/640-1075
ASA	The Acoustical Society of America ASA Office Manager Suite 1NO1 2 Huntington Quadrangle Melville, NY 11747-4502 http://asa.aip.org	516/576-2360
ASCE	American Society of Civil Engineers 1801 Alexander Bell Drive Reston, VA 20191 www.asce.org	800/548-2723 703/295-6300
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329-2305 www.ashrae.org	800/527-4723 404/636-8400
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 Three Park Avenue New York, NY 10016-5990 www.asme.org	800/434-2763

ASPE	American Society of Plumbing Engineers 2980 S River Rd. Des Plaines, IL 60018 http://aspe.org	847/296-0002
ASQ	American Society for Quality P.O. Box 3005 Milwaukee, WI 53201-3005 or 600 North Plankinton Avenue Milwaukee, WI 53203 http://asq.org	800/248-1946 414/272-8575
ASSE	American Society of Sanitary Engineering 901 Canterbury, Suite A Westlake, Ohio 44145 www.asse-plumbing.org	440/835-3040
ASTM	ASTM International 100 Barr Harbor Drive PO Box C700 West Conshohocken, PA, 19428-2959 www.astm.org	610/832-9500
AWCI	Association of the Wall and Ceiling Industry 513 West Broad Street, Suite 210 Falls Church, VA 22046 www.awci.org	703/538-1600
AWPA	American Wood Protection Association (formerly American Wood Preservers Institute) P.O. Box 361784 Birmingham, AL 35236-1784 www.awpa.com	205/733-4077
AWPI	American Wood Preservers Institute 2750 Prosperity Ave. Suite 550 Fairfax, VA 22031-4312 www.arcat.com	800/356-AWPI 703/204-0500
AWS	American Welding Society 8669 NW 36 Street, Suite 130 Miami, FL 33166 www.aws.org	800/443-9353 305/443-9353
AWI	Architectural Woodwork Institute 46179 Westlake Drive, Suite 120 Potomac Falls, VA 20165-5874 www.awinet.org	571/323-3636

AWWA	American Water Works Association 6666 West Quincy Avenue Denver, CO 80235 www.awwa.org	800/926-7337 303/794-7711
ВНМА	Builders Hardware Manufacturers Association 355 Lexington Avenue, 15th Floor New York, NY 10017 www.buildershardware.com	212/297-2122
BIA	The Brick Industry Association 1850 Centennial Park Drive, Suite 301 Reston, VA 20191 www.gobrick.com	703/620-0010
CGA	Compressed Gas Association 14501 George Carter Way, Suite 103 Chantilly VA 20151-2923 www.cganet.com	703/788-2700
CISCA	Ceilings & Interior Systems Construction Association 1010 Jorie Blvd, Suite 30 Oak Brook, IL 60523 www.cisca.org	630/584-1919
CISPI	Cast Iron Soil Pipe Institute 1064 Delaware Avenue SE Atlanta, GA 30316 www.cispi.org	404/622-0073
CLFMI	Chain Link Fence Manufacturers Institute 10015 Old Columbia Road, Suite B-215 Columbia, MD 21046 www.associationsites.com/main- pub.cfm?usr=clfma	410/290-6267
СРА	Composite Panel Association 19465 Deerfield Avenue, Suite 306 Leesburg, VA 20176 www.compositepanel.org	703/724-1128
CPSC	Consumer Product Safety Commission 4330 East-West Highway Bethesda, MD 20814 www.cpsc.gov	301/504-7923 800/638-2772
CRA	California Redwood Association 405 Enfrente Drive, Suite 200 Novato, CA 94949 www.calredwood.org	415/382-0662

CRI	Carpet and Rug Institute 100 S. Hamilton Street Dalton, GA 30722-2048 www.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
CSI	The Construction Specifications Institute 123 North Pitt St, Suite 450 Alexandria, VA 22314 www.csinet.org	800/689-2900
CTIOA	Ceramic Tile Institute of America 12061 Jefferson Blvd. Culver City, CA 90230-6219 www.ctioa.org	310/574-7800
DHI	Door and Hardware Institute (formerly National Builders Hardware Association) 14150 Newbrook Dr. Chantilly, VA 20151 www.dhi.org	703/222-2010
DIPRA	Ductile Iron Pipe Research Association 2000 2nd Avenue, South Suite 429 Birmingham, AL 35233 www.dipra.org	205/402-8700
DOC	U.S. Department of Commerce 1401 Constitution Ave., NW Washington, DC 20230 www.commerce.gov	202/482-2000
DOT	U.S. Department of Transportation 1200 New Jersey Avenue, SE Washington, DC 20590 www.dot.gov	855/368-4200
ЕЈМА	Expansion Joint Manufacturers Association, Inc. 25 North Broadway Tarrytown, NY 10591 www.ejma.org	914/332-0040

ЕРА	Environmental Protection Agency Ariel Rios Building 1200 Pennsylvania Avenue, N.W. Washington, DC 20460 www.epa.gov	202/272-0167
FCICA	Floor Covering Installation Contractors Association 7439 Millwood Drive West Bloomfield, MI 48322 www.fcica.com	248/661-5015 877/TO-FCICA
FGIA	Fenestration and Glazing Industry Alliance 1900 E Golf Rd, Suite 1250 Schaumburg, IL 60173 https://fgiaonline.org/	847/303-5664
FM Global	Factory Mutual Insurance Company Amy Daley Global Practice Leader – Education, Public Entities, Health Care FM Global 270 Central Avenue Johnston, RI 02919-4949 www.fmglobal.com	401/275-3000 401/275-3029
FS	General Services Administration (GSA) Index of Federal Specifications, Standards and Commercial Item Descriptions 470 East L'Enfant Plaza, SW, Suite 8100 Washington, DC 20407 www.gsa.gov	202/619-8925
GA	The Gypsum Association 6525 Belcrest Road, Suite 480 Hyattsville, MD 20782 www.gypsum.org	301/277-8686
НМА	Hardwood Manufacturers Association One Williamsburg Place, Suite 108 Warrendale, PA 15086 http://hmamembers.org	412/244-0440

IAPMO	International Association of Plumbing and Mechanical Officials (formerly the Western Plumbing Officials Association) 4755 E. Philadelphia St. Ontario, CA 91761 www.iapmo.org	909/472-4100
ICC	International Code Council 500 New Jersey Avenue, NW, 6th Floor Washington, DC 20001 www.iccsafe.org	888/422-7233
IEEE	Institute of Electrical and Electronics Engineers 3 Park Avenue, 17th Floor New York, NY 10016-5997 www.ieee.org	212/419-7900
IES	Illuminating Engineering Society 120 Wall Street, Floor 17 New York, NY 10005-4001 www.ies.org	212/248-5000
ITRK	Intertek Testing Services 3933 US Route 11 Cortland, NY 13045 www.intertek.com	607/753-6711
MCAA	Mechanical Contractors Association of America 1385 Piccard Drive Rockville, MD 20850 www.mcaa.org	301/869-5800
MIA	Marble Institute of America 28901 Clemens Rd, Ste 100 Cleveland, OH 44145 www.marble-institute.com	440/250-9222
MMPA (formerly WMMPA)	Moulding & Millwork Producers Association (formerly Wood Moulding & Millwork Producers Association) 507 First Street Woodland, CA 95695 www.wmmpa.com	530/661-9591 800/550-7889

MSS	Manufacturers Standardization Society (MSS) of the Valve and Fittings Industry, Inc. 127 Park Street, NE Vienna, VA 22180-4602 http://mss-hq.org	703/281-6613
NAAMM	National Association of Architectural Metal Manufacturers 800 Roosevelt Rd. Bldg. C, Suite 312 Glen Ellyn, IL 60137 www.naamm.org	630/942-6591
NAIMA	North American Insulation Manufacturers Association P.O. Box 1906 Alexandria, VA 22313 https://insulationinstitute.org/	703/684-0084
NALP	National Association of Landscape Professionals (formerly Professional Landcare Network) 12500 Fair Lakes Circle, Suite 200 Fairfax, VA 22033 https://www.landscapeprofessionals.org/	703/736-9666
NAPA	National Asphalt Pavement Association 6406 Ivy Lane, Suite 350 Greenbelt, MD 20770-1441 www.asphaltpavement.org	888/468-6499 301/731-4748
NCSPA	National Corrugated Steel Pipe Association 14070 Proton Road, Suite 100 Dallas, TX 75244 www.ncspa.org	972/850-1907
NCMA	National Concrete Masonry Association 13750 Sunrise Valley Drive Herndon, VA 20171-4662 www.ncma.org	703/713-1900
NEBB	National Environmental Balancing Bureau 8575 Grovemont Circle Gaithersburg, MD 20877 www.nebb.org	301/977-3698
NECA	National Electrical Contractors Association 3 Bethesda Metro Center, Suite 1100 Bethesda, MD 20814 www.necanet.org	301/657-3110
NEMA	National Electrical Manufacturers Association 1300 North 17th Street N, Suite 900 Rosslyn, VA 22209 www.nema.org	703/841-3200

NEII	National Elevator Industry, Inc. 1677 County Route 64 P.O. Box 838 Salem, New York 12865-0838 www.neii.org	518/854-3100
NFPA	National Fire Protection Association 1 Batterymarch Park Quincy, MA USA 02169-7471 www.nfpa.org	800/344-3555 855/274-8525
NGA (formerly GANA)	National Glass Association (merged with Glass Association of North America) 1945 Old Gallows Road Suite 750 Vienna, VA 22182 www.glass.org	866/342-5642 Ext 127
NHLA	National Hardwood Lumber Association PO Box 34518 Memphis, TN 38184 www.nhla.com	901/377-1818
NIA	National Insulation Association 12100 Sunset Hills Road, Suite 330 Reston, VA 20190 www.insulation.org	703/464-6422
NRCA	National Roofing Contractors Association 10255 W. Higgins Road, Suite 600 Rosemont, IL 60018-5607 www.nrca.net	847/299-9070
NSF	NSF International P.O. Box 130140 789 N. Dixboro Road Ann Arbor, MI 48113-0140, USA www.nsf.org	800/673-6275 734/769-8010
NTMA	National Terrazzo and Mosaic Association 209 N. Crockett Street, Suite 2 PO Box 2605 Fredericksburg, TX 78624 www.ntma.com	800/323-9736
OSHA	Occupational Safety and Health Act U.S. Department of Labor Occupational Safety & Health Administration 200 Constitution Ave., NW Washington, DC 20210 www.osha.gov	800/321-OSHA (6742)

PCA	Portland Cement Association 5420 Old Orchard Road Skokie, IL 60077 or 500 New Jersey Ave., N.W. 7 th Floor Washington, D.C. 20001 www.cement.org	847/966-6200 202/408-9494
PCA	Painting Contractors Association (formerly Painting and Decorating Contractors of America) 2316 Millpark Drive Maryland Heights, MO 63043 https://www.pcapainted.org/	800/322-7322
PCI	Precast/Prestressed Concrete Institute 200 W. Adams St. #2100 Chicago, IL 60606 www.pci.org	312/786-0300
PDCA	Painting and Decorating Contractors of America 2316 Millpark Drive, Ste 220 Maryland Heights, MO 63043 www.pdca.com	800/332-PDCA (7322) 314/514-7322
PDI	Plumbing & Drainage Institute 800 Turnpike Street, Suite 300 North Andover, MA 01845 http://pdionline.org	978/557-0720 800/589-8956
PEI	Porcelain Enamel Institute, Inc. P.O. Box 920220 Norcross, GA 30010 www.porcelainenamel.com	770/676-9366
PG&E	Pacific Gas & Electric Company P.O. Box 997300 Sacramento, CA 95899-7300 www.pge.com	800/743-5000
PLIB	Pacific Lumber Inspection Bureau (formerly West Coast Lumber Inspection Bureau) 1010 South 336th Street, Suite 210 Federal Way, WA 98003-7394 https://www.plib.org/	253/835-3344
RFCI	Resilient Floor Covering Institute 115 Broad Street, Suite 201 La Grange GA 30240 www.rfci.com	706/882-3833

SDI	Steel Deck Institute P.O. Box 25 Fox River Grove, IL 60021	847/458-4647
SDI	www.sdi.org Steel Door Institute	440/899-0010
351	30200 Detroit Road Westlake, OH 44145 www.steeldoor.org	440/033 0010
SJI	Steel Joist Institute 234 W. Cheves Street Florence, SC 29501 http://steeljoist.org	843/407-4091
SMA	Stucco Manufacturers Association 500 East Yale Loop Irvine, CA 92614 www.stuccomfgassoc.com	949/387-7611
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association 4201 Lafayette Center Drive Chantilly, VA 20151-1219 www.smacna.org	703/803-2980
SPI	SPI: The Plastics Industry Trade Association, Inc. 1425 K St. NW, Suite 500 Washington, DC 20005 www.plasticsindustry.org	202/974-5200
TCA	The Tile Council of North America 100 Clemson Research Blvd. Anderson, SC 29625 www.tcnatile.com	864/646-8453
TPI	Truss Plate Institute 2670 Crain Highway, Suite 203 Waldorf, MD 20601 www.tpinst.org	240/587-5582
TPI	Turfgrass Producers International 444 E. Roosevelt Road #346 Lombard, IL 60148 www.turfgrasssod.org	800/405-8873 847/649-5555
TCIA	Tree Care Industry Association (formerly the National Arborist Association) 136 Harvey Road, Suite 101 Londonderry, NH 03053 www.tcia.org	800/733-2622

TVI	The Vermiculite Institute c/o The Schundler Company 150 Whitman Avenue Edison, NJ. 08817 www.vermiculiteinstitute.org	732/287-2244
UL	Underwriters Laboratories Inc. 333 Pfingsten Road Northbrook, IL 60062-2096 www.ul.com	847/272-8800 877/854-3577
UNI	Uni-Bell PVC Pipe Association 2711 LBJ Freeway, Suite 1000 Dallas, TX 75234 www.uni-bell.org	972/243-3902
USDA	U.S. Department of Agriculture 1400 Independence Ave., S.W. Washington, DC 20250 www.usda.gov	202/720-2791
WA	Wallcoverings Association 401 North Michigan Avenue Suite 2200 Chicago, IL 60611 www.wallcoverings.org	312/321-5166

WCLIB	West Coast Lumber Inspection Bureau P.O. Box 23145 Portland, OR 97281 or 6980 S.W. Varns Tigard, OR 97223 www.wclib.org	503/639-0651
WCMA	Window Covering Manufacturers Association 355 Lexington Avenue 15th Floor New York, NY 10017 www.wcmanet.org	212/297-2122
WDMA	Window & Door Manufacturers Association 2001 K Street NW, 3rd Floor North Washington, D.C. 20006 www.wdma.com	202/367-1157
WCMA	Window Covering Manufacturers Association 355 Lexington Avenue 15th Floor New York, New York 10017 www.wcmanet.org	212/297-2122
WDMA	Window & Door Manufacturers Association 401 N. Michigan Avenue, Suite 2200 Chicago, IL 60611 or 2025 M Street, NW, Ste. 800 Washington, D.C. 20036-3309 www.wdma.com	312/321-6802 202/367-1157
WI	Woodwork Institute P.O. Box 980247 West Sacramento, CA 95798 www.wicnet.org	916/372-9943
WRI	Wire Reinforcement Institute 942 Main Street, Suite 300 Hartford, CT 06103 www.wirereinforcementinstitute.org	860/240-9545
WWCA	Western Wall & Ceiling Contractors Association 1910 N. Lime St. Orange, CA 92865 www.wwcca.org	714/221-5520
WWPA	Western Wood Products Association (formerly Redwood Inspection Service) 1500 SW First Ave., Suite 870 Portland, OR 97201 www.wwpa.org	503/224-3930

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

Project Number: 23-006

DOCUMENT 01 43 00

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, including, without limitation, Purchase of Materials and Equipment;
- B. Special Conditions;
- C. Imported Materials Certification.

1.02 MATERIAL AND EQUIPMENT

- A. Only items approved by the District 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 District 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, access to the Site or buildings, 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 District, 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 a bonded warehouse and with appropriate insurance coverage at no cost to District.
- 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 District.

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

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

Where material is specified solely by reference to "standard specifications" and if requested by District, 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.

Pool Deck Replacement Project Project Number: 23-006

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 so as to not interfere with installation of others. Adjustment or rework because of Contractor's failure to coordinate will be at no additional cost to District.
- 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

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

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 who does not have other approved applicator work in progress or completed is not approved for this Project.

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3.05 MANUFACTURER'S RECOMMENDATIONS

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 District and the Architect in writing, and shall not proceed until interpretation or clarification has been issued by the District and/or the Architect.

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DOCUMENT 01 45 00

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, including, without limitation, Inspector, Inspections and Tests, Uncovering of Work and Non-conforming of Work and Correction of Work;
- B. Special Conditions.

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.
- B. The Division of the State Architect ("DSA") shall be notified at or before the start of construction.

1.03 OBSERVATION AND SUPERVISION:

- A. The District 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, including, without limitation, CCR, Part 1, Title 24, Section 4-341.
- B. One or more Project Inspector(s) approved by DSA and employed by or in contract with the District, referred to hereinafter as the "Project Inspector", will observe the work in accordance with CCR, Part 1, Title 24, Sections 4-333(b) and 4-342:
 - (1) The Project Inspector and Special Inspector(s) shall have access to the Work wherever it is in preparation or progress for ascertaining that the Work is in accordance with the Contract Documents and all applicable code sections. The Contractor shall provide facilities and operation of equipment as needed, and access as required and shall provide assistance for sampling or measuring materials.
 - (2) The Project Inspector will notify the District and Architect and call the attention of the Contractor to any observed failure of Work or material to conform to Contract Documents.

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(3) The Project Inspector shall observe and monitor all testing and inspection activities required.

The Contractor shall conform with all applicable laws as indicated in the Contract Documents, including, without limitation, to CCR, Part 1, Title 24, Section 4-343. The Contractor shall supervise and direct the Work and maintain a competent superintendent on the job who is authorized to act in all matters pertaining to the Work. The Contractor's superintendent shall also inspect all materials, as they arrive, for compliance with the Contract Documents. Contractor shall reject defective Work or materials immediately upon delivery or failure of the Work or material to comply with the Contract Documents. The Contractor shall submit verified reports as indicated in the Contract Documents, including, without limitation, the Specifications and as required by Part 1, Title 24, Section 4-336.

1.04 TESTING AGENCIES:

- A. Testing agencies and tests shall be in conformance with the General Documents and the requirements of Part 1, Title 24, Section 4- 335.
- B. Testing and inspection in connection with earthwork shall be under the direction of the District'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 District.

1.05 TESTS AND INSPECTIONS:

- A. The Contractor shall be responsible for notifying the District and Project Inspector of all required tests and inspections. Contractor shall notify the District and Project Inspector at least seventy-two hours (72) 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 District will pay for first inspections and tests required by the "CCR", and other inspections or tests that the District and/or the Architect may direct to have made, including the following principal items:
 - (1) Tests and observations for earthwork and paving.
 - (2) Tests for concrete mix designs, including tests of trial batches.
 - (3) Tests and inspections for structural steel work.
 - (4) Field tests for framing lumber moisture content.

- (5) Additional tests directed by the District that establish that materials and installation comply with the Contract Documents.
- (6) Tests and observations of welding and expansion anchors.
- D. The District may at its discretion, pay and then back charge the Contractor for:
 - (1) Retests or reinspections, 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 District;
 - (b) The Construction Manager, if any;
 - (c) The Architect;
 - (d) The Consulting Engineer, if any;
 - (e) Other engineers on the Project, as appropriate;
 - (f) The Project Inspector; and
 - (g) The Contractor.
 - (2) When the test or inspection is one required by the CCR, a copy of the report shall also be provided to the DSA.

PART 2 - PRODUCTS

2.01 TYPE OF TESTS AND INSPECTIONS:

A. Testing and inspection shall be in accordance with DSA Form 103 (or current version)

PART 3 - EXECUTION Not Used.



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DOCUMENT 01 50 00

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:

- Α. General Conditions;
- B. Special Conditions;
- C. Site Standards; and
- D. Construction Waste Management and Disposal.

1.02 TEMPORARY UTILITIES:

- Α. Electric Power and Lighting:
 - Contractor will pay for power during the course of the Work. To the (1)extent power is available in the building(s) or on the Site, Contractor may use the District's existing utilities by making prearranged payments to the District for the utilities used by Contractor and all Subcontractors. 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.
 - Contractor shall verify characteristics of power available in building(s) (2) 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) 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.
 - (4) Contractor shall be responsible for maintaining existing lighting levels in the project vicinity should temporary outages or service interruptions occur.
- B. Heat and Ventilation:
 - Contractor shall provide temporary heat to maintain environmental (1)conditions to facilitate progress of the Work, to meet specified

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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.

C. Water:

- (1) Contractor shall pay for water used during the course of the Work. Contractor shall coordinate and pay for installation or use of water meter in compliance with local water agency requirements. To the extent water is then available in the building(s) or on the Site, Contractor may use the District's existing utilities by making prearranged payments to the District for the utilities used by Contractor and all Subcontractors. Contractor shall be responsible for providing temporary facilities required to deliver such utility service from its existing location in the building(s) on the Site, or other location approved by the local water agency, to point of intended use.
- (2) Contractor shall use backflow preventers on water lines at point of connection to District's water supply. Backflow preventers shall comply with requirements of Uniform Plumbing Code.
- (3) Contractor shall make potable water available for human consumption.

D. 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 Inspector 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 Inspector 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 Inspector and the District.

E. Telephone Service:

 Contractor shall arrange with local telephone service company for telephone service as required 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.

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(2) Contractor shall pay the costs for telephone and fax lines installation, maintenance, service, and removal.

F. 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.

G. Trash Removal:

(1) Contractor shall provide trash removal on a timely basis, no less than weekly. Under no circumstance shall Contractor use District trash service.

H. Field Office:

(1) Not Applicable.

1.03 CONSTRUCTION AIDS:

A. Plant and Equipment:

- (1) Contractor shall furnish, operate, and maintain a complete plant for fabricating, handling, conveying, installing, and erecting materials and equipment; and for conveyances for transporting workers. Include elevators, hoists, debris chutes, and other equipment, tools, and appliances necessary for performance of the Work.
- (2) Contractor shall maintain plant and equipment in safe and efficient operating condition. Damages due to defective plant and equipment, and uses made thereof, shall be repaired by Contractor at no expense to the District.
- B. None of the District's tools and equipment shall be used by Contractor for the performance of the Work.

1.04 BARRIERS AND ENCLOSURES:

- A. Contractor shall obtain the District'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

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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.

D. Tree and Plant Protection:

- (1) Contractor shall preserve and protect existing trees and plants on the Premises that are not designated or required to be removed, and those adjacent to the Premises.
- (2) Contractor shall provide barriers to a minimum height of 4'-0" around drip line of each tree and plant, around each group of trees and plants, as applicable, in the proximity of demolition and construction operations, or as denoted on the Plans.
- (3) Contractor shall not park trucks, store materials, perform Work or cross over landscaped areas. Contractor shall not dispose of paint thinners, water from cleaning, plastering or concrete operations, or other deleterious materials in landscaped areas, storm drain systems, or sewers. Plant materials damaged as a result of the performance of the Work shall, at the option of the District and at Contractor's expense, either be replaced with new plant materials equal in size to those damaged or by payment of an amount representing the value of the damaged materials as determined by the District.
- (4) Contractor shall remove soil that has been contaminated during the performance of the Work by oil, solvents, and other materials which could be harmful to trees and plants, and replace with good soil, at Contractor's expense.
- (5) Excavation around Trees:
 - (a) Excavation within drip lines of trees shall be done only where absolutely necessary and with written permission from the District.
 - (b) Where trenching for utilities is required within drip lines, tunneling under and around roots shall be by hand digging and shall be approved by the District. Main lateral roots and taproots shall not be cut. All roots 2 inches in diameter and larger shall be tunneled under and heavily wrapped with wet burlap so as to prevent scarring or excessive drying. Smaller roots that interfere with installation of new work may be cut with prior approval by the District. Roots must first be cut with a Vermeer, or equivalent, root cutter prior to any trenching.
 - (c) Where excavation for new construction is required within drip line of trees, hand excavation shall be employed to minimize damage to root system. Roots shall be relocated in backfill

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areas wherever possible. If encountered immediately adjacent to location of new construction, roots shall be cut approximately 6 inches back from new construction.

- (d) Approved excavations shall be carefully backfilled with the excavated materials approved for backfilling. Backfill shall conform to adjacent grades without dips, sunken areas, humps, or other surface irregularities. Do not use mechanical equipment to compact backfill. Tamp carefully using hand tools, refilling and tamping until Final Acceptance as necessary to offset settlement.
- (e) Exposed roots shall not be allowed to dry out before permanent backfill is placed. Temporary earth cover shall be provided, or roots shall be wrapped with four layers of wet, untreated burlap and temporarily supported and protected from damage until permanently relocated and covered with backfill.
- (f) Accidentally broken roots should be sawed cleanly 3 inches behind ragged end.

1.05 SECURITY:

The Contractor shall be responsible for project security for materials, tools, equipment, supplies, and completed and partially completed Work.

1.06 TEMPORARY CONTROLS:

- A. Noise Control:
 - (1) Contractor acknowledges that adjacent facilities may 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 District 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 District to minimize and/or cease 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

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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 periodically water exterior demolition and construction areas to minimize the generation of dust and dirt.
- (3) Contractor shall ensure that all hauling equipment and trucks carrying loads of soil and debris shall have their loads sprayed with water or covered with tarpaulins, and as otherwise required by local and state ordinance.
- (4) 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.

F. Lighting:

(1) If portable lights are used after dark, all light must be located so as not to direct light into neighboring property.

1.07 JOB SIGN(S):

A. Not Applicable.

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) without the written permission of the District.

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PART 2 – PRODUCTS Not used.

PART 3 – EXECUTION Not used.



DOCUMENT 01 50 13

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

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; and
- C. Temporary Facilities and Controls.

1.02 SECTION INCLUDES:

- A. Administrative and procedural requirements for the following:
 - (1) Salvaging non-hazardous construction waste.
 - (2) Recycling non-hazardous construction waste.
 - (3) Disposing of non-hazardous construction waste.

1.03 DEFINITIONS:

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.04 PERFORMANCE REQUIREMENTS:

A. General: Develop waste management plan that results in end-of Project rates for salvage/recycling of sixty-five percent (65%) by weight (or by volume, but not a combination) of total waste generated by the Work.

1.05 SUBMITTALS:

- A. Waste Management Plan: Submit waste management plan within 30 days of date established for commencement of the Work.
- B. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit copies of report. Include the following information:
 - (1) Material category.
 - (2) Generation point of waste.
 - (3) Total quantity of waste in tons or cubic yards.
 - (4) Quantity of waste salvaged, both estimated and actual in tons or cubic yards.
 - (5) Quantity of waste recycled, both estimated and actual in tons or cubic yards.
 - (6) Total quantity of waste recovered (salvaged plus recycled) in tons or cubic yards.
 - (7) Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- C. Waste Reduction Calculations: Before request for final payment, submit copies of calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- D. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.
- E. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- F. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.

Qualification Data: For Waste Management Coordinator.

- I. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.
- J. Submittal procedures and quantities are specified in Document 01 33 00.

1.06 QUALITY ASSURANCE:

Н.

- A. Waste Management Coordinator Qualifications: LEED Accredited Professional by U.S. Green Building Council.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements. Review methods and procedures related to waste management including, but not limited to, the following:
 - (1) Review and discuss waste management plan including responsibilities of Waste Management Coordinator.
 - (2) Review requirements for documenting quantities of each type of waste and its disposition.
 - (3) Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - (4) Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - (5) Review waste management requirements for each trade.

1.07 WASTE MANAGEMENT PLAN:

- A. General: Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measurement throughout waste management plan.
- B. Waste Identification: Indicate anticipated types and quantities of site-clearing and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.

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- (1) Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
- (2) Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
- (3) Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
- (4) Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
- (5) Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
- (6) Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION

3.01 PLAN IMPLEMENTATION:

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
 - (1) Comply with Document 01 50 00 for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan. Coordinator shall be present at Project site full time for duration of Project.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - (1) Distribute waste management plan to everyone concerned within 3 days of submittal return.

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(2) Distribute waste management plan to entities when they first begin work on site. Review plan procedures and locations established for salvage, recycling, and disposal.

- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
 - (1) Designate and label specific areas of Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.
 - (2) Comply with Document 01 50 00 for controlling dust and dirt, environmental protection, and noise control.

3.02 RECYCLING CONSTRUCTION WASTE:

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to the Contractor.
- C. Procedures: Separate recyclable waste from other waste materials, trash, and debris. Separate recyclable waste by type at Project site to the maximum extent practical.
 - (1) Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project Site. Include list of acceptable and unacceptable materials at each container and bin.
 - (a) Inspect containers and bins for contamination and remove contaminated materials if found.
 - (2) Stockpile processed materials on site without intermixing with other materials. Place, grade, and shape stockpiles to drain surface water. Cover to prevent windblown dust.
 - (3) Stockpile materials away from construction area. Do not store within drip line of remaining trees.
 - (4) Store components off the ground and protect from the weather.
 - (5) Remove recyclable waste off District property and transport to recycling receiver or processor.

D. Packaging:

- (1) Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
- (2) Polystyrene Packaging: Separate and bag material.

(3) Pallets: As much as possible, require deliveries using pallets to remove pallets from Project Site. For pallets that remain on Site, break down pallets into component wood pieces and comply with

requirements for recycling wood.

- (4) Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- E. Site-Clearing Wastes: Chip brush, branches, and trees on site.
- F. Wood Materials:
 - (1) Clean Cut-Offs of Lumber: Grind or chip into small pieces.
 - (2) Clean Sawdust: Bag sawdust that does not contain painted or treated wood.
- G. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
 - (1) Clean Gypsum Board: Grind scraps of clean gypsum board using small mobile chipper or hammer mill. Screen out paper after grinding.

3.03 DISPOSAL OF WASTE:

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project Site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
 - (1) Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on site.
 - (2) Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off District property and legally dispose of them.

DOCUMENT 01 57 13

EROSION CONTROL

PART 1 - GENERAL

1.01 SCOPE OF WORK

- A. General: Provide all materials, equipment, and labor necessary to furnish and install BMPs and require maintenance as shown on the drawings.
- B. Storm Water Pollution Prevention Plan: A Storm Water Pollution Prevention Plan (SWPPP) is not required on this project. The Contractor shall provide the following, but not limited to:
 - (1) Cut and fill operations.
 - (2) Temporary stockpiles.
 - (3) Vehicle and equipment storage, maintenance and fueling operations.
 - (4) Concrete, plaster, mortar and paint disposal.
 - (5) Dust control.
 - (6) Tracking of dirt, mud on off-site streets.
 - (7) Pipe flushing.
 - (8) Appropriate Erosion Controls.

1.02 QUALITY ASSURANCE

A. General: Comply with governing codes and regulations.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Straw Wattles: Shall be new manufactured straw roles in compliance with state requirements for sediment control.
- B. Filter Bag: Shall be as required by local jurisdiction.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Straw Wattles: shall be installed per the drawings and/or as required by the SWPP.

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B. Filter Bags: Shall be installed as required by manufacturer's requirements.

3.02 MAINTENANCE AND REMOVAL

- A. General: Maintain and repair existing and new erosion control facilities throughout the construction period. Remove silt build up at straw wattles and/or silt fences as needed. Repair damage to earth slopes and banks. Erosion control measures shall be left in place until final paving and landscaping are complete.
- B. Monitoring: Contractor shall provide all site monitoring and recommendations to meet current NPDES requirements during construction.
- C. Cleaning: Keep area clean of debris.
- D. Remove erosion control measures prior to placing finish landscaping.

DOCUMENT 01 64 00

OWNER-FURNISHED PRODUCTS

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:

- Α. General Conditions;
- B. Special Conditions; and
- C. Materials and Equipment.

1.02 SECTION INCLUDES

- Α. Requirements for the following:
 - Installing Owner-furnished materials and equipment. (1)
 - (2) Providing necessary utilities, connections and rough-ins.

1.03 DEFINITIONS

- Owner: District, who is providing/furnishing materials and equipment. Α.
- В. Installing Contactor: Contractor, who is installing the materials and equipment furnished by the Owner.

1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- Α. Receive, store and handle products in accordance with the manufacturer's instructions.
- Protect equipment items as required to prevent damage during storage and В. construction.

PART 2 - PRODUCTS

2.01 GENERAL PRODUCT REQUIREMENTS

- Α. Installing Contractor's Responsibilities:
 - Verify mounting and utility requirements for Owner-furnished materials (1) and equipment items.

Provide mounting and utility rough in for all items where required.

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- (a) Rough in locations, sizes, capacities, and similar type items shall be as indicated and required by product manufacturer.
- B. Owner and Installing Contractor(s) Responsibilities:
 - (1) Owner-Furnished/Contractor Installed ("OFCI"): Furnished by the Owner; installed by the Installing Contractor.
 - (a) General: Owner and Installing Contractor(s) will coordinate deliveries of materials and equipment to coincide with the construction schedule.
 - (b) Owner will furnish specified materials and equipment delivered to the site. Owner/vendor's representative shall be present on Site at the time of delivery to comply with the contract requirements and Specifications Section 01 43 00, Materials and Equipment, Article 1.04.
 - (c) The Owner furnishing specified materials and equipment is responsible to provide manufacturer guarantees as required by the Contract to the Installing Contractor.
 - (d) The Installing Contractor shall:
 - 1) Review, verify and accept the approved manufacturer's submittal/Shop Drawings for all materials and equipment required to be installed by the Installing Contractor and furnished by the Owner. Any discrepancies, including but not limited to possible space conflicts, should be brought to the attention of the Project Manager and/or Program Manager, if applicable.
 - 2) Coordinate timely delivery. Installing Contractor shall receive materials and equipment at Site when delivered and give written receipt at time of delivery, noting visible defects or omissions; if such declaration is not given, the Installing Contractor shall assume responsibility for such defects and omissions.
 - 3) Store materials and equipment until ready for installation and protect from loss and damage. Installing Contractor is responsible for providing adequate storage space.
 - 4) Coordinate with other bid package contractors and field measurement to ensure complete installation.
 - 5) Uncrate, assemble, and set in place.
 - 6) Provide adequate supports.

- 7) Install materials and equipment in accordance with manufacturer's recommendations, instructions, and Shop Drawings, supply labor and material required, and make mechanical, plumbing, and electrical connections required to operate equipment.
- 8) Be certified by equipment manufacturer for installation of the specific equipment supplied by the Owner.
- 9) Provide anchorage and/or bracing as required for seismic restraint per Title 24, UBC Standard 27-11 and all other applicable codes.
- 10) Provide the contract-required warranty and guarantee for all work, materials and equipment, and installation upon its completion and acceptance by the District. Guarantee includes all costs associated with the removal, shipping to and from the Site, and reinstallation of any equipment found to be defective.
- C. Compatibility with Space and Service Requirements:
 - (1) Equipment items shall be compatible with space limitations indicated and as shown on the Contract Documents and specified in other sections of the Specifications.
 - (2) Modifications to equipment items required to conform to space limitations specified for rough in shall not cause additional cost to the District.
- D. Manufacturer's printed descriptions, specifications, and instructions shall govern the Work unless specifically indicated or specified otherwise.

2.02 FURNISHED MATERIALS AND EQUIPMENT

A. All furnished materials and equipment are indicated or scheduled on the Contract Documents.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install equipment items in accordance with the manufacturer's instructions.
- B. Set equipment items securely in place, rigidly or flexibly mounted in accordance with manufacturers' directions.
- C. Make electrical and mechanical connections as indicated and required.
- D. Touch-up and restore damaged or defaced finishes to the Owner's satisfaction.

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3.02 CLEANING AND PROTECTION

- A. Repair or replace items not acceptable to the Architect or Owner.
- B. Upon completion of installation, clean equipment items in accordance with manufacturer's recommendations, and protect from damage until final acceptance of the Work by the Owner.

SECTION 01 66 00

PRODUCT 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.
- C. Contractor shall provide off-site storage and protection when Site does not permit on-site storage or protection.

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- 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.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

DOCUMENT 01 71 23

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 Californiaregistered 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:

Contractor shall only use a qualified licensed engineer or registered land surveyor, to whom District makes no objection.

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 District and Architect.
 - (2) Report to District 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:

Contractor shall maintain a complete, accurate log of all control and survey work as it progresses.

1.06 SUBMITTALS:

- Α. Contractor shall submit name and address of Surveyor and Professional Engineer to District and Architect prior to its/their work on the Project.
- В. On request of District and Architect, Contractor shall submit documentation to verify accuracy of field engineering work, at no additional cost to the District.
- 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 COMPLIANCE WITH LAWS:

Contractor is responsible for meeting all applicable codes, OSHA, safety and shoring requirements.

3.02 NONCONFORMING WORK:

Contractor is responsible for any re-surveying required by correction of nonconforming work.

DOCUMENT 01 73 29

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, including, without limitation, Inspector, Inspections, and Tests, Integration of Work, Nonconforming Work, and Correction of Work, and Uncovering Work;
- B. Special Conditions;
- C. Hazardous Materials Procedures and Requirements;
- D. Hazardous Materials Certification;
- E. Lead-Based Paint Certification;
- F. 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) Attaching 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 District, 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 District; 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 District 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 District 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) Affects of Work on District, 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 District or other District contractor(s) 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 District'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 District, 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 District.
- B. District 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 District, other than defective or nonconforming Work, will be paid by District 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 District.
- 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 District as indicated in the General Conditions and shall proceed with Work as indicated in the General Conditions by District.

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 from 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,

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- 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.



DOCUMENT 01 76 00

ALTERATION PROJECT 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, including, without limitation, Integration of Work, Purchase of Materials and Equipment, Uncovering of Work and Nonconforming Work and Correction of Work and Trenches;
- 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 District 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 and square or straight 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 District 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 District and the Architect for review and approval.

C. Contractor shall trim and seal existing wood doors and shall trim and paint metal 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, in the area where the Work is performed.

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.
- C. Contractor shall give special attention to avoid damaging or killing trees, bushes and/or shrubs on the Premises and/or identified in the Contract Documents, including without limitation, the Drawings.

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.



DOCUMENT 01 77 00

CONTRACT CLOSEOUT AND FINAL CLEANING

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, Completion of Work;
- B. Special Conditions;
- C. Temporary Facilities and Controls.

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 all 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 and surrounding areas.

1.04 ADJUSTING

Contractor shall adjust operating products and equipment to ensure smooth and unhindered operation.

1.05 RECORD DOCUMENTS AND SHOP DRAWINGS

- A. Contractor shall legibly mark each item to record actual construction, including:
 - (1) Measured depths of foundation in relation to finish floor datum.
 - (2) Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permit surface improvements.
 - (3) Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 - (4) Field changes of dimension and detail.
 - (5) Details not on original Contract Drawings
 - (6) Changes made by modification(s).
 - (7) References to related Shop Drawings and modifications.
- B. Contractor will provide one set of Record Drawings to District.
- C. Contractor shall submit all required documents to District and/or Architect prior to or with its final Application for Payment.

1.06 INSTRUCTION OF DISTRICT PERSONNEL

- A. Before final inspection, at agreed upon times, Contractor shall instruct District's designated personnel in operation, adjustment, and maintenance of products, equipment, and systems.
- B. For equipment requiring seasonal operation, Contractor shall perform instructions for other seasons within six months or by the change of season.
- C. 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.
- D. Contractor shall prepare and insert additional data in Operation and Maintenance Manual when the need for such data becomes apparent during instruction.
- E. Contractor shall review contents of manual with personnel in detail to explain all aspects of operation and maintenance.

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.

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B. Contractor shall provide District with all required Operation and Maintenance Data at one time. Partial or piecemeal submissions of Operation and Maintenance Data will not be accepted.

PART 2 - PRODUCTS Not used.

PART 3 – EXECUTION Not used.



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DOCUMENT 01 78 23

OPERATION AND MAINTENANCE DATA

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, Completion of the Work;
- B. Special Conditions.

1.02 QUALITY ASSURANCE:

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.
- 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,

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- 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 any and 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.

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- 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, shut-down, and emergency instructions. Contractor shall include summer, winter, and any special operating instructions.
- E. Maintenance Requirements: Contractor shall include routine procedures and guide for trouble-shooting; 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.

1.07 SUBMITTAL:

- A. Contractor shall submit to the District for review two (2) copies 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 District, Contractor shall submit draft

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content for that portion of the Manual within ten (10) days after acceptance of that equipment or component.

- C. Contractor shall submit two (2) copies 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 District prior to District's approval of Contractor's final Application for Payment.
- D. Contractor must submit two (2) copies of revised Manual in final form within ten (10) days after final inspection.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

DOCUMENT 01 78 36

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, including, without limitation, Warranty/Guarantee Information;
- B. Special Conditions.

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 District's permission, Contractor shall leave date of beginning of time of warranty blank 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 District'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 District approval all warranties and related documents within ten (10) days after date of completion. Contractor must revise the warranties as required by the District prior to District's approval of Contractor's final Application for Payment.
- C. For items of work delayed beyond date of completion, Contractor shall provide an updated submittal within ten (10) days after acceptance, listing the date of acceptance as start of warranty period.

PART 2 - PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

DOCUMENT 01 78 39

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.

PART 2 - RECORD DRAWINGS

2.01 GENERAL:

- A. As indicated in in the Contract Documents, the District will provide the Contractor with one set, in PDF format, of the original contract drawings.
- B. Contractor shall maintain at each Project Site one set of marked-up plans and shall transfer all changes and information to those marked-up plans, as often as required in the Contract Documents, but in no case less than once each month. Contractor shall submit to the Project Inspector one set of Project Record Drawings ("As-Builts") showing all changes incorporated into the Work since the preceding monthly submittal. The As-Builts shall be available at the Project Site. The Contractor shall submit a pdf digital set and CADD files if utilized, of As-Built Record Drawings at the conclusion of the Project following review by the Project Inspector and Architect of Record.
- 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:
 - Locations of Work buried under or outside each building, including, without limitation, all utilities, plumbing and electrical lines, and conduits.

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- (2) Actual numbering of each electrical circuit to match panel schedule.
- (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 stubouts, invert elevations, etc.
- (8) Sufficient information to locate Work concealed in each building with reasonable ease and accuracy.

In some instances, this information may be recorded by dimension. In other instances, it may be recorded 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."
- D. After review and approval of the marked-up specifications by the Project Inspector, Contractor shall provide electronic copies of the drawings (in PDF format) with one file with all of the sheets and one set of individual sheet files at the conclusion of the Project.

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 actually installed.
- B. After review and approval of the marked-up specifications by the Project Inspector, Contractor shall provide one electronic copy of the specifications (in PDF format) at the conclusion of the Project.

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PART 4 - MAINTENANCE OF RECORD DOCUMENTS

4.01 GENERAL

- A. Contractor shall store Record Documents apart from documents used for construction as follows:
 - (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. Contractor shall not use Record Documents for construction purposes.

PART 5 - PRODUCTS Not Used.

END OF DOCUMENT

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Extent of selective demolition work is indicated on drawings.

B. Section Includes:

- 1. Demolition and removal of selected site elements.
- 2. Salvage of existing items to be reused or recycled.

C. Related Requirements:

- 1. Section 011000 "Summary" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.
- 2. Section 017416 "Cutting and Patching" for cutting and patching procedures.
- 3. Section 017419 "Construction Waste Management and Disposal".

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

1.3 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.4 PREINSTALLATION MEETINGS

- A. Predemolition Conference: Conduct conference at Project site.
 - 1. Inspect and discuss condition of construction to be selectively demolished.

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- 2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
- 3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
- 4. Review areas where existing construction is to remain and requires protection.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For refrigerant recovery technician.
- B. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property, for dust control and, for noise control. Indicate proposed locations and construction of barriers.
- C. Schedule of Selective Demolition Activities: Indicate the following:
 - 1. Interruption of utility services. Indicate how long utility services will be interrupted.
 - 2. Coordination for shutoff, capping, and continuation of utility services.
- D. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by demolition operations.

1.6 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 FIELD CONDITIONS

- A. Owner will be continuously occupying areas of the building immediately adjacent to areas of selective demolition. Conduct selective demolition work in manner that will minimize need for disruption of Owner's normal operations. Provide minimum of 72 hours advance notice to Owner of demolition activities which will severely impact Owner's normal operations.
- B. Owner assumes no responsibility for actual condition of items of structures to be demolished.
 - 1. Owner will remove and salvage selected elements from the area of work prior to start of demolition or during progress of work. Elements so affected will be clearly marked/identified and are to be excluded from work.
 - 2. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical. However, variations within structure may occur by Owner's removal and salvage operations prior to start of selective demolition work.

- C. Partial Demolition and Removal: Items indicated to be removed but of salvable value to Contractor may be removed from structure as work progresses. Transport salvaged items from site as they are removed.
 - 1. Storage or sale of removed items on site will not be permitted.
- D. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- E. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- F. Storage or sale of removed items or materials on-site is not permitted.
- G. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
 - 1. Maintain fire-protection facilities in service during selective demolition operations.

1.8 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to commencement of selective demolition work, inspect areas in which work will be performed. Photograph existing conditions to structure surfaces, equipment or to surrounding properties which could be misconstrued as damage resulting from selective demolition work; file with Owner's Representative prior to starting work.
- B. Permits: Where applicable, Contractors shall give all notices to governmental agencies, obtain all required permits, arrange for agency inspections and pay all associated fees related to legally mandated environmental protection regulations.
- C. Verify that utilities have been disconnected and capped before starting selective demolition operations.

- D. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or video.
 - 1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Arrange to shut off utilities with utility companies.
 - 2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building. Provide minimum of 72 hours advance notice to Owner if shut- down of service is necessary during change-over.
 - 3. Disconnect, demolish, and remove fire-suppression systems, plumbing, and HVAC systems, equipment, and components indicated on Drawings to be removed.
 - a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
 - b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
 - c. Equipment to Be Removed: Disconnect and cap services and remove equipment.
 - d. Equipment to Be Removed and Reinstalled: Disconnect and cap services and remove, clean, and store equipment; when appropriate, reinstall, reconnect, and make equipment operational.
 - e. Equipment to Be Removed and Salvaged: Disconnect and cap services and remove equipment and deliver to Owner.

3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

- 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
- 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
- 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
- 4. Cover and protect equipment that have not been removed.
- 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Section 015000 "Temporary Facilities and Controls."
- B. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. Perform all selective demolition work necessary for installation of new work, including but not limited to, removal of walls, foundations, openings, electrical, mechanical, plumbing, roofing and finishes.
- B. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping. Temporarily cover openings to remain.
 - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
 - 4. Maintain fire watch during and for at least 1 hours after flame-cutting operations.
 - 5. Maintain adequate ventilation when using cutting torches.
 - 6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
 - 7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 8. Demolish concrete and masonry in small sections. Cut concrete and masonry at junctures with construction to remain using power-driven masonry saw or hand tools; do not use power-driven impact tools.
 - 9. For renovation work remove existing door hardware indicated to be replaced by new hardware as shown in the door and hardware schedules.
 - 10. Remove existing door hardware for new door hardware designated on opening and hardware schedules.
 - 11. If unanticipated mechanical, electrical or structural elements which conflict with intended function or design are encountered, investigate and measure both nature

- and extent of the conflict. Submit report to Owner's Representative in written, accurate detail. Pending receipt of directive from Owner's Representative rearrange selective demolition schedule as necessary to continue overall job progress without delay.
- 12. Dispose of demolished items and materials promptly. Comply with requirements in Section 017419 "Construction Waste Management and Disposal."
- C. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- D. Removed and Salvaged Items:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's storage area designated by Owner and obtain receipt.
 - 5. Protect items from damage during transport and storage.
- E. Removed and Reinstalled Items:
 - 1. Clean and repair items to functional condition adequate for intended reuse.
 - 2. Pack or crate items after cleaning and repairing. Identify contents of containers.
 - 3. Protect items from damage during transport and storage.
 - 4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- F. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch (19 mm) at junctures with construction to remain. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete. Neatly trim openings to dimensions indicated.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. Remove demolition waste materials from Project site and recycle or dispose of them according to Section 017419 "Construction Waste Management and Disposal."
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

3.7 CLEAN UP AND REPAIR

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.
- B. Upon completion of demolition work, remove tools, equipment and demolished materials from site. Remove protections and leave interior areas broom clean.
- C. Repair all surfaces to match existing surfaces of doors and frames at removed hardware conditions left evident after new hardware installations.
- D. Repair demolition performed in excess of that required. Return structures and surfaces to remain to condition existing prior to commencement of selective demolition work. Repair adjacent construction or surfaces soiled or damaged by selective demolition work. All grass and lawn areas altered or destroyed due to construction work shall be replaced with sod of similar grass type as existing adjacent grasses. Contractor shall ensure lawn is level and returned to its original condition to the satisfaction of the architect.
- E. Repair all surfaces to match existing adjacent surfaces where existing system has been removed and left evident after new system installation, i.e. ducts, louvers, conduits, etc.

END OF SECTION 024119

SECTION 055213 - PIPE AND TUBE RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Steel railings.
- 2. Stainless steel railings.

1.2 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- C. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not satisfy structural performance requirements.

1.3 ACTION SUBMITTALS

A. Product Data:

- 1. Manufacturer's product lines of mechanically connected railings.
- 2. Perforated metal infill panels.
- 3. Fasteners.
- 4. Post-installed anchors.
- 5. Handrail brackets.
- 6. Shop primer.
- 7. Intermediate coats and topcoats.
- 8. Bituminous paint.
- 9. Nonshrink, nonmetallic grout.
- 10. Anchoring cement.
- 11. Metal finishes.
- 12. Paint products.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

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- C. Samples for Initial Selection: For products involving selection of color, texture, or design, including mechanical finishes.
- D. Samples for Verification: For each type of exposed finish required.
 - 1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters, including finish.
 - 2. Fittings and brackets.
 - 3. Assembled Sample of railing system, made from full-size components, including top rail, post, handrail, and infill. Sample need not be full height.
 - a. Show method of connecting and finishing members at intersections.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For testing agency.
- B. Welding certificates.
- C. Mill Certificates: Signed by manufacturers of stainless steel products, certifying that products furnished comply with requirements.
- D. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers, certifying that shop primers are compatible with topcoats.
- E. Product Test Reports: For tests on railings performed by a qualified testing agency, in accordance with ASTM E894 and ASTM E935.
- F. Research Reports: For post-installed anchors, from ICC-ES or other qualified testing agency acceptable to authorities having jurisdiction.

1.5 QUALITY ASSURANCE

- A. Welding Qualifications: Qualify procedures and personnel in accordance with the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code Steel."
 - 2. AWS D1.6/D1.6M, "Structural Welding Code Stainless Steel."
- B. Comply with most current edition of California Building Code (CBC)
 - 1. CBC Chapter 10 Means of Egress
 - 2. CBC Chapter 11B Accessibility to Public Buildings, Public Accommodations, Commercial Facilities and Publicly Funded Housing
 - 3. CBC 16A Structural Design
 - 4. CBC 22A Steel

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect mechanical finishes on exposed surfaces of railings from damage by applying a strippable, temporary protective covering before shipping.

1.7 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication.
 - 1. Provide allowance for trimming and fitting on site.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. Handrails and Top Rails of Guards:
 - a. Uniform load of 50 lbf/ ft. (0.73 kN/m) applied in any direction.
 - b. Concentrated load of 200 lbf (0.89 kN) applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 2. Infill of Guards:
 - a. Concentrated load of 50 lbf (0.22 kN) applied horizontally on an area of 1 sq. ft. (0.093 sq. m).
 - b. Infill load and other loads need not be assumed to act concurrently.
- B. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

2.2 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

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- B. Brackets, Flanges, and Anchors: Cast or formed metal of same type of material and finish as supported rails unless otherwise indicated.
 - 1. Provide type of bracket with predrilled hole for exposed bolt anchorage and that provides 1-1/2-inch (38-mm) clearance from inside face of handrail to finished wall surface.

2.3 STEEL RAILINGS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Sharpe Products
 - 2. Wagner, R&B, Inc.; A division of the Wagner Companies
 - 3. Or approved equal
- B. Source Limitations: Obtain each type of railing from single source from single manufacturer.
- C. Tubing: ASTM A500/A500M (cold formed) Grade A or ASTM A513/A513M, Type 5.
 - 1. Provide galvanized finish for exterior installations and where indicated.
- D. Plates, Shapes, and Bars: ASTM A36/A36M.
- E. Cast Iron Fittings: Either gray iron, ASTM A48/A48M, or malleable iron, ASTM A47/A47M, unless otherwise indicated.

2.4 STAINLESS STEEL RAILINGS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. C.R. Laurence Co., Inc.
 - 2. Julius Blum & Co., Inc.
 - 3. Stainless Fabricators, Inc.
 - 4. Wagner Companies (The); R&B Wagner, Inc.
- B. Source Limitations: Obtain each type of railing from single source from single manufacturer.
- C. Pipe: ASTM A312/A312M, Grade TP 304.
- D. Castings: ASTM A743/A743M, Grade CF 8 or CF 20.
- E. Plate and Sheet: ASTM A240/A240M or ASTM A666, Type 304.

- F. Perforated Metal Infill Panels: Stainless steel sheet, ASTM A240/A240M or ASTM A666, Type 316L, 0.062 inch (1.59 mm) thick, with 1/4-inch (6.4-mm) holes 3/8 inch (9.5 mm) o.c. in staggered rows.
 - 1. Basis-of-Design Product: Provide product with perforations matching product indicated on Drawings.

2.5 FASTENERS

A. Fastener Materials:

- 1. Hot-Dip Galvanized Railing Components: Type 304 stainless steel or hot-dip zinc-coated steel fasteners complying with ASTM A153/A153M or ASTM F2329/F2329M for zinc coating.
- 2. Stainless Steel Railing Components: Type 304 stainless steel fasteners.
- 3. Finish exposed fasteners to match appearance, including color and texture, of railings.
- B. Fasteners for Anchoring Railings to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction and capable of withstanding design loads.
- C. Fasteners for Interconnecting Railing Components:
 - 1. Provide concealed fasteners for interconnecting railing components and for attaching them to other work, unless exposed fasteners are unavoidable or are the standard fastening method for railings indicated.
 - 2. Provide tamper-resistant square or hex socket flat-head machine screws for exposed fasteners unless otherwise indicated.
- D. Anchors: Provide cast-in-place or torque-controlled expansion anchors, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed when installed in concrete, as determined by testing per ASTM E 488 conducted by a qualified independent testing agency.
 - 1. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 (A1) stainless steel bolts, ASTM F593, and nuts, ASTM F594.

2.6 MISCELLANEOUS MATERIALS

- A. Handrail Brackets: Cast stainless steel, center of handrail. See drawings for dimension of bracket from wall.
- B. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for metal alloy welded.

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- 1. For stainless steel railings, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.
- C. Etching Cleaner for Galvanized Metal: Complying with MPI#25.
- D. Galvanizing Repair Paint: High-zinc-dust-content paint, complying with SSPC-Paint 20 and compatible with paints specified to be used over it.
- E. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout, complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.
- F. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
 - 1. Water-Resistant Product: At exterior locations and where indicated on Drawings, provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

2.7 FABRICATION

- A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Shop assemble railings to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations.
 - 1. Clearly mark units for reassembly and coordinated installation.
 - 2. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately.
 - 1. Remove burrs and ease edges to a radius of approximately 1/32 inch (1 mm) unless otherwise indicated.
 - 2. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that are exposed to weather in a manner that excludes water.
 - 1. Provide weep holes where water may accumulate.
 - 2. Locate weep holes in inconspicuous locations.

- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Connections: Fabricate railings with welded connections unless otherwise indicated.
- H. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
 - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
 - 2. Obtain fusion without undercut or overlap.
 - 3. Remove flux immediately.
 - 4. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Finish #1 welds; ornamental quality with no evidence of a welded joint
- I. Nonwelded Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
- J. Form changes in direction as follows:
 - 1. By flush bends or by inserting prefabricated flush-elbow fittings.
- K. Close exposed ends of hollow railing members with prefabricated cap and end fittings of same metal and finish as railings.
- L. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch (6 mm) or less.
- M. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.
 - 1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers or other means to transfer loads through wall finishes to structural supports and prevent bracket or fitting rotation and crushing of substrate.
- N. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work.
 - 1. Fabricate anchorage devices capable of withstanding loads imposed by railings.
 - 2. Coordinate anchorage devices with supporting structure.
- O. For railing posts set in concrete, provide stainless steel sleeves not less than 6 inches (150 mm) long with inside dimensions not less than 1/2 inch (13 mm) greater than outside dimensions of post, with metal plate forming bottom closure.
- P. Perforated-Metal Infill Panels: Fabricate infill panels from perforated metal made from same metal as railings in which they are installed.

- 1. Edge panels with U-shaped channels made from metal sheet, of same metal as perforated metal and not less than 0.043 inch (1.1 mm) thick.
- 2. Orient perforated metal with pattern parallel to top rail.

2.8 STEEL AND IRON FINISHES

A. Galvanized Railings:

- 1. Hot-dip galvanize indicated steel railings, including hardware, after fabrication.
- 2. Do not quench or apply post-galvanizing treatments that might interfere with paint adhesion.
- 3. Fill vent and drain holes that are exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.
- B. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.
- C. Powder-Coat Finish for Galvanized Metal: Prepare, treat, and coat galvanized metal to comply with resin manufacturer's written instructions, per ASTM D 6386, and as follows:
 - 1. Prepare galvanized metal by thoroughly removing grease, dirt, oil, flux, and other foreign matter.
 - 2. Treat prepared metal with zinc-phosphate pretreatment, rinse, and seal surfaces.
 - 3. Apply thermosetting polyester or acrylic urethane powder coating with cured-film thickness of not less than 1.5 mils (0.04 mm).
 - 4. Color: As selected by Architect from manufacturer's full range.

2.9 STAINLESS STEEL FINISHES

- A. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
- B. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
 - 1. Run grain with long dimension of each piece.
 - 2. When polishing is completed, passivate and rinse surfaces.
 - 3. Remove embedded foreign matter and leave surfaces chemically clean.
- C. Stainless Steel Pipe and Tubing Finishes:
 - 1. 320-Grit Polished Finish: Oil-ground, uniform, fine, directionally textured finish.
- D. Stainless Steel Sheet and Plate Finishes:
 - 1. Directional Satin Finish: ASTM A480/A480, No. 4.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements are clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

- A. Perform cutting, drilling, and fitting required for installing railings.
 - 1. Fit exposed connections together to form tight, hairline joints.
 - 2. Install railings level, plumb, square, true to line; without distortion, warp, or rack.
 - 3. Set railings accurately in location, alignment, and elevation; measured from established lines and levels.
 - 4. Do not weld, cut, or abrade surfaces of railing components that are coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
 - 5. Set posts plumb within a tolerance of 1/16 inch in 3 feet (2 mm in 1 m).
 - 6. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (6 mm in 3.5 m).
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
- C. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

- A. Welded Connections: Use fully welded joints for permanently connecting railing components. Comply with requirements for welded connections in "Fabrication" Article, whether welding is performed in the shop or in the field.
- B. Expansion Joints: Install expansion joints at locations indicated but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve, extending 2 inches (50 mm) beyond joint on either side; fasten internal sleeve securely to one side; and locate joint within 6 inches (150 mm) of post.

3.4 ANCHORING POSTS

- A. Form or core-drill holes not less than 5 inches (125 mm) deep and 3/4 inch (20 mm) larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with non-shrink, nonmetallic f'c 3000psi min. strength grout or anchoring cement, mixed and placed to comply with anchoring material manufacturer's written instructions.
- B. Cover anchorage joint with flange of same metal as post, welded to post after placing anchoring material.
- C. Leave anchorage joint exposed with 1/8-inch (3-mm) buildup, sloped away from post.
- D. Anchor posts to metal surfaces with flanges, angle type, or floor type, as required by conditions, connected to posts and to metal supporting members as follows:
 - 1. For steel railings, weld flanges to post and bolt to metal supporting surfaces.

3.5 ATTACHING RAILINGS

- A. Anchor railing ends to concrete and masonry with flanges connected to railing ends and anchored to wall construction with anchors and bolts.
- B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and welded to railing ends.
- C. Attach handrails to walls with wall brackets. Provide brackets with 1-1/2-inch (38-mm) clearance from inside face of handrail and finished wall surface.
 - 1. Use type of bracket with predrilled hole for exposed bolt anchorage.
 - 2. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads.
- D. Secure wall brackets to building construction as follows:
 - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.

3.6 CLEANING

- A. Clean stainless steel by washing thoroughly with clean water and soap and rinsing with clean water.
- B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas, and repair galvanizing to comply with ASTM A780/A780M.

3.7 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period, so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 055213

SECTION 062013 - EXTERIOR FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Exterior wood planks and trim.
- B. Related Sections:
 - 1. Section 099300 "Staining and Transparent Finishing" for stain.

1.2 INFORMATIONAL SUBMITTALS

- A. Compliance Certificates:
 - 1. For lumber that is not marked with grade stamp.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers between each bundle to provide air circulation.
 - 1. Protect materials from weather by covering with waterproof sheeting, securely anchored.
 - 2. Provide for air circulation around stacks and under coverings.

1.4 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecast weather conditions permit work to be performed and at least one coat of specified finish can be applied without exposure to rain, snow, or dampness.
- B. Do not install finish carpentry materials that are wet, moisture damaged, or mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, comply with applicable rules of any rules-writing agency certified by the American Lumber Standard Committee's (ALSC) Board of Review. Grade lumber by an agency certified by the ALSC's Board of Review to inspect and grade lumber under the rules indicated.
 - 1. Factory mark each piece of lumber with grade stamp of inspection agency, indicating grade, species, moisture content at time of surfacing, and mill.
 - 2. For exposed lumber, mark grade stamp on end or back of each piece, or omit grade stamp and provide certificates of grade compliance issued by inspection agency.

2.2 EXTERIOR PLANKS AND TRIM

- A. Lumber Trim for Clear Finish:
 - 1. Species and Grade: Western red cedar; WRCLA, NLGA, WCLIB, or WWPA Grade A.
 - 2. Maximum Moisture Content: 19 percent with at least 85 percent of shipment at 12 percent or less.
 - 3. Face Surface: Surfaced (smooth).

2.3 MISCELLANEOUS MATERIALS

- A. Fasteners for Exterior Finish Carpentry: Provide nails or screws, in sufficient length to penetrate not less than 1-1/2 inches (38 mm) into wood substrate.
 - 1. Provide stainless steel fasteners.
- B. Wood Glue: Waterproof resorcinol glue recommended by manufacturer for exterior carpentry use.

2.4 FABRICATION

- A. Back out or kerf backs of standing and running trim wider than 5 inches (125 mm), except members with ends exposed in finished work.
- B. Ease edges of lumber less than 1 inch (25 mm) in nominal thickness to 1/16-inch (1.5-mm) radius and edges of lumber 1 inch (25 mm) or more in nominal thickness to 1/8-inch (3-mm) radius.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of projections and substances detrimental to application.

3.3 INSTALLATION, GENERAL

- A. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
- B. Install exterior finish carpentry level, plumb, true, and aligned with adjacent materials.
 - 1. Use concealed shims where necessary for alignment.
 - 2. Scribe and cut exterior finish carpentry to fit adjoining work.
 - 3. Install to tolerance of 1/8 inch in 96 inches (3 mm in 2438 mm) for level and plumb. Install adjoining exterior finish carpentry with 1/32-inch (0.8-mm) maximum offset for flush installation and 1/16-inch (1.5-mm) maximum offset for reveal installation.
 - 4. Coordinate exterior finish carpentry with materials and systems in or adjacent to it.
 - 5. Provide cutouts for mechanical and electrical items that penetrate exterior finish carpentry.

3.4 INSTALLATION OF PLANKS AND TRIM

- A. Install flat-grain lumber with bark side exposed to weather.
- B. Fit exterior joints to exclude water.
 - 1. Cope at returns and miter at corners to produce tight-fitting joints, with full-surface contact throughout length of joint.
 - 2. Plane backs of casings to provide uniform thickness across joints, where necessary for alignment.

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C. Where face fastening is unavoidable, countersink fasteners, fill surface flush, and sand unless otherwise indicated.

3.5 ADJUSTING

- A. Replace exterior finish carpentry that is damaged or does not comply with requirements.
 - 1. Exterior finish carpentry may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.
- B. Adjust joinery for uniform appearance.

3.6 CLEANING

- A. Clean exterior finish carpentry on exposed and semiexposed surfaces.
- B. Touch up factory-applied finishes to restore damaged or soiled areas.

3.7 PROTECTION

- A. Protect installed products from damage from weather and other causes during construction.
- B. Remove and replace finish carpentry materials that are wet, moisture damaged, and mold damaged.
 - 1. Indications that materials are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that materials are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 062013

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Formed wall sheet metal fabrications.
- B. Related Requirements:
 - 1. Section 079200 "Joint Sealants"

1.2 COORDINATION

- A. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
- B. Coordinate sheet metal flashing and trim installation with adjoining wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.

1.3 PREINSTALLATION MEETING

- A. Preinstallation Conference: Conduct a conference at Project Site.
 - 1. Review construction schedule. Verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 - 2. Review sheet metal flashing observation and repair procedures after flashing installation.

1.4 ACTION SUBMITTALS

- A. Product Data: For each of the following, including manufacturer's product data, installation instructions and general recommendations for each specified sheet material and fabricated product.
 - 1. Underlayment materials.
 - 2. Elastomeric sealant.
 - 3. Epoxy seam sealer.
- B. Shop Drawings: For sheet metal flashing and trim.
 - 1. Include plans, elevations, sections, and attachment details.

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- 2. Detail fabrication and installation layouts, expansion-joint locations, and keyed details. Distinguish between shop- and field-assembled Work.
- 3. Include identification of material, thickness, weight, and finish for each item and location in Project.
- 4. Include details for forming, including profiles, shapes, seams, and dimensions.
- 5. Include details for joining, supporting, and securing, including layout and spacing of fasteners, cleats, clips, and other attachments. Include pattern of seams.
- 6. Include details of termination points and assemblies.
- 7. Include details of special conditions.
- 8. Include details of connections to adjoining work.
- 9. Detail formed flashing and trim at scale of not less than 1-1/2 inches per 12 inches (1:10).
- C. Samples: For each exposed product and for each color and texture specified, 12 inches (300 mm) long by actual width.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For fabricator.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For sheet metal flashing and trim, and its accessories, to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Fabricator Qualifications: Employs skilled workers who custom fabricate sheet metal flashing and trim similar to that required for this Project and whose products have a record of successful in-service performance.
- B. Sheet Metal Flashing and Trim Standard: Comply with SMACNA "Architectural Sheet Metal Manual" and NRCA "Roofing and Waterproofing Manual" unless more stringent requirements are indicated or specified.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting, or other surface damage.
 - 1. Store sheet metal flashing and trim materials away from uncured concrete and masonry.
 - 2. Protect stored sheet metal flashing and trim from contact with water.
- B. Deliver sheet metal flashing materials and fabrications undamaged. Protect sheet metal flashing, trim materials, and fabrications during transportation and handling.

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- C. Unload, store and install sheet metal flashing materials and fabrications in a manner to prevent bending, warping, twisting and surface damage.
- D. Stack materials on platforms or pallets, covered with suitable weathertight and ventilated covering. Do not store sheet metal flashing and trim materials in contact with other materials that might cause staining, denting or other surface damage.
- E. Protect strippable protective covering on sheet metal flashing and trim from exposure to sunlight and high humidity, except to extent necessary for period of sheet metal flashing and trim installation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight. Coordinate with work of other Sections for watertight installation at interface with other materials and systems.
- B. Sheet Metal Standard for Flashing and Trim: Comply with SMACNA's "Architectural Sheet Metal Manual" requirements for dimensions and profiles shown unless more stringent requirements are indicated.
- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes to prevent buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- D. Water Infiltration: Provide sheet metal flashing and trim that to not allow water infiltration to building interior.
- E. Provide materials that are compatible with one another under conditions or service and application required, as demonstrated by testing and field experience.

2.2 SHEET METALS

A. Protect mechanical and other finishes on exposed surfaces from damage by applying strippable, temporary protective film before shipping.

- B. Stainless Steel Sheet: ASTM A240/A240M, Type 304, dead soft, fully annealed; with smooth, flat surface.
 - 1. Finish: ASTM A480/A480M, No. 4 (polished directional satin).
 - a. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
 - b. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
 - 1) Run grain of directional finishes with long dimension of each piece.
 - 2) When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
- C. Metallic-Coated Steel Sheet: Provide zinc-coated (galvanized) steel sheet in accordance with ASTM A653/A653M, G90 (Z275) coating designation; prepainted by coil-coating process to comply with ASTM A755/A755M.
 - 1. Surface: Smooth, flat and mill phosphatized for field painting.

2.3 UNDERLAYMENT MATERIALS

- A. Felt: ASTM D226/D226M, Type II (No. 30), asphalt-saturated organic felt; nonperforated.
- B. Slip Sheet: Rosin-sized building paper, 3 lb/100 sq. ft. (0.16 kg/sq. m) minimum.

2.4 MISCELLANEOUS MATERIALS

- A. Provide materials and types of fasteners, solder, protective coatings, sealants, and other miscellaneous items as required for complete sheet metal flashing and trim installation and as recommended by manufacturer of primary sheet metal unless otherwise indicated.
- B. Fasteners: Wood screws, annular threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners designed to withstand design loads and recommended by manufacturer of primary sheet metal.
 - 1. General: Blind fasteners or self-drilling screws, gasketed, with hex-washer head.
 - a. Exposed Fasteners: Heads matching color of sheet metal using plastic caps or factory-applied coating. Provide metal-backed EPDM or PVC sealing washers under heads of exposed fasteners bearing on weather side of metal.
 - b. Blind Fasteners: High-strength aluminum or stainless steel rivets suitable for metal being fastened.
 - c. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
 - 2. Fasteners for Stainless Steel Sheet: Series 300 stainless steel.

3. Fasteners for Zinc-Coated (Galvanized) Steel Sheet: Series 300 stainless steel or hot-dip galvanized steel in accordance with ASTM A153/A153M or ASTM F2329.

C. Solder:

- 1. For Stainless Steel: ASTM B32, Grade Sn60, with acid flux of type recommended by stainless steel sheet manufacturer.
- 2. For Zinc-Coated (Galvanized) Steel: ASTM B32, Grade Sn50, 50 percent tin and 50 percent lead or Grade Sn60, 60 percent tin and 40 percent lead.
- D. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
- E. Elastomeric Sealant: ASTM C920, elastomeric polyurethane or silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
- F. Metal Accessories: Provide sheet metal clips, cleats, straps, anchoring devices, and similar accessory units as required for installation of work, matching or compatible with material being installed, noncorrosive, size and gauge required for performance.

2.5 FABRICATION, GENERAL

- A. Custom fabricate sheet metal flashing and trim to comply with details indicated and recommendations in cited sheet metal standard that apply to design, dimensions, geometry, metal thickness, and other characteristics of item required.
 - 1. Fabricate sheet metal flashing and trim in shop to greatest extent possible.
 - 2. Fabricate sheet metal flashing and trim in thickness or weight needed to comply with performance requirements, but not less than that specified for each application and metal.
 - 3. Verify shapes and dimensions of surfaces to be covered and obtain field measurements for accurate fit before shop fabrication.
 - 4. Form sheet metal flashing and trim to fit substrates without excessive oil-canning, buckling, and tool marks; true to line, levels, and slopes; and with exposed edges folded back to form hems.
 - 5. Conceal fasteners and expansion provisions where possible. Do not use exposed fasteners on faces exposed to view.

B. Fabrication Tolerances:

- 1. Fabricate sheet metal flashing and trim that is capable of installation to a tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.
- 2. Fabricate sheet metal flashing and trim that is capable of installation to tolerances specified.

- C. Expansion Provisions: Form metal for thermal expansion of exposed flashing and trim.
 - 1. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
 - 2. Use lapped expansion joints only where indicated on Drawings.
- D. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal in accordance with cited sheet metal standard to provide for proper installation of elastomeric sealant.
- E. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal.

F. Seams:

- 1. Fabricate nonmoving seams with flat-lock seams. Tin edges to be seamed, form seams, and solder.
- G. Do not use graphite pencils to mark metal surfaces.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with installer present, for compliance with requirements for installation tolerances, substrate, and other conditions affecting performance of the Work.
 - 1. Verify compliance with requirements for installation tolerances of substrates.
 - 2. Verify that substrate is sound, dry, smooth, clean, sloped for drainage, and securely anchored.
 - 3. Verify that air- or water-resistant barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF UNDERLAYMENT

- A. Felt Underlayment: Install felt underlayment, wrinkle free, using adhesive to minimize use of mechanical fasteners under sheet metal flashing and trim.
 - 1. Install in shingle fashion to shed water.
 - 2. Lap joints not less than 2 inches (50 mm).
- B. Install slip sheet, wrinkle free, directly on substrate before installing sheet metal flashing and trim.

- 1. Install in shingle fashion to shed water.
- 2. Lapp joints not less than 4 inches (100 mm).

3.3 INSTALLATION, GENERAL

- A. Install sheet metal flashing and trim to comply with details indicated and recommendations of cited sheet metal standard that apply to installation characteristics required unless otherwise indicated on Drawings.
 - 1. Install fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete sheet metal flashing and trim system.
 - 2. Install sheet metal flashing and trim true to line, levels, and slopes. Provide uniform, neat seams with minimum exposure of solder, welds or sealant.
 - 3. Anchor sheet metal flashing and trim and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 4. Install sheet metal flashing and trim to fit substrates and to result in watertight performance.
 - 5. Install continuous cleats with fasteners spaced not more than 12 inches (300 mm)
 - 6. Install exposed sheet metal flashing and trim with limited oil-canning, and free of buckling and tool marks.
 - 7. Do not field cut sheet metal flashing and trim by torch.
 - 8. Do not use graphite pencils to mark metal surfaces.
- B. Metal Protection: Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer or cited sheet metal standard.
 - 1. Coat concealed side of stainless steel sheet metal flashing and trim with bituminous coating where flashing and trim contact wood, ferrous metal, or cementitious construction.
 - 2. Underlayment: Where installing sheet metal flashing and trim directly on cementitious or wood substrates, install underlayment and cover with slip sheet.
- C. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim.
 - 1. Space movement joints at maximum of 10 feet (3 m) with no joints within 24 inches (600 mm) of corner or intersection.
 - 2. Form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with sealant concealed within joints.
 - 3. Use lapped expansion joints only where indicated on Drawings.
- D. Fasteners: Use fastener sizes that penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.

- E. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.
- F. Seal joints as required for watertight construction.
 - 1. Use sealant-filled joints unless otherwise indicated.
 - a. Embed hooked flanges of joint members not less than 1 inch (25 mm) into sealant.
 - b. Form joints to completely conceal sealant.
 - c. When ambient temperature at time of installation is between 40 and 70 deg F (4 and 21 deg C), set joint members for 50 percent movement each way.
 - d. Adjust setting proportionately for installation at higher ambient temperatures.
 - 1) Do not install sealant-type joints at temperatures below 40 deg F (4 deg C).
 - 2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."
- G. Soldered Joints: Clean surfaces to be soldered, removing oils and foreign matter.
 - 1. Pretin edges of sheets with solder to width of 1-1/2 inches (38 mm); however, reduce pretinning where pretinned surface would show in completed Work.
 - 2. Do not use torches for soldering.
 - 3. Heat surfaces to receive solder, and flow solder into joint.
 - a. Fill joint completely.
 - b. Completely remove flux and spatter from exposed surfaces.
 - 4. Stainless Steel Soldering:
 - a. Tin edges of uncoated sheets, using solder for stainless steel and acid flux.
 - b. Promptly remove acid-flux residue from metal after tinning and soldering.
 - c. Comply with solder manufacturer's recommended methods for cleaning and neutralization.

3.4 INSTALLATION OF WALL FLASHINGS

A. Install sheet metal wall flashing to intercept and exclude penetrating moisture in accordance with cited sheet metal standard unless otherwise indicated. Coordinate installation of wall flashing with adjacent materials.

3.5 INSTALLATION TOLERANCES

A. Installation Tolerances: Shim and align sheet metal flashing and trim within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines indicated on Drawings and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.6 CLEANING

- A. Clean exposed metal surfaces of substances that interfere with uniform oxidation and weathering.
- B. Clean and neutralize flux materials. Clean off excess solder.
- C. Clean off excess sealants.

3.7 PROTECTION

- A. Remove temporary protective coverings and strippable films as sheet metal flashing and trim are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. On completion of sheet metal flashing and trim installation, remove unused materials and clean finished surfaces as recommended in writing by sheet metal flashing and trim manufacturer.
- C. Maintain sheet metal flashing and trim in clean condition during construction.
- D. Replace sheet metal flashing and trim that have been damaged or that have deteriorated beyond successful repair by finish touchup or similar minor repair procedures, as determined by Architect.

END OF SECTION 076200

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Mildew-resistant joint sealants.
 - 2. Latex joint sealants.
- B. Related Requirements:
 - 1. Section 092900 "Gypsum Board" for sealing joints in sound-rated construction.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each joint-sealant product.
- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Samples for Verification: For each kind and color of joint sealant required, provide Samples with joint sealants in 1/2-inch- (13-mm-) wide joints formed between two 6-inch- (150-mm-) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Joint-Sealant Schedule: Include the following information:
 - 1. Joint-sealant application, joint location, and designation.
 - 2. Joint-sealant manufacturer and product name.
 - 3. Joint-sealant formulation.
 - 4. Joint-sealant color.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Product Test Reports: For each kind of joint sealant, for tests performed by manufacturer and witnessed by a qualified testing agency.

- C. Preconstruction Laboratory Test Schedule: Include the following information for each joint sealant and substrate material to be tested:
 - 1. Joint-sealant location and designation.
 - 2. Manufacturer and product name.
 - 3. Type of substrate material.
 - 4. Proposed test.
 - 5. Number of samples required.
- D. Preconstruction Laboratory Test Reports: From sealant manufacturer, indicating the following:
 - 1. Materials forming joint substrates and joint-sealant backings have been tested for compatibility and adhesion with joint sealants.
 - 2. Interpretation of test results and written recommendations for primers and substrate preparation are needed for adhesion.
- E. Preconstruction Field-Adhesion-Test Reports: Indicate which sealants and joint preparation methods resulted in optimum adhesion to joint substrates based on testing specified in "Preconstruction Testing" Article.
- F. Field-Adhesion-Test Reports: For each sealant application tested.
- G. Sample Warranties: For special warranties.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.
- B. Product Testing: Test joint sealants using a qualified testing agency.
 - 1. Testing Agency Qualifications: Qualified according to ASTM C1021 to conduct the testing indicated.
- C. Mockups: Install sealant in mockups of assemblies specified in other Sections that are indicated to receive joint sealants specified in this Section. Use materials and installation methods specified in this Section.

1.6 PRECONSTRUCTION TESTING

- A. Preconstruction Laboratory Testing: Submit to joint-sealant manufacturers, for testing indicated below, samples of materials that will contact or affect joint sealants.
 - 1. Adhesion Testing: Use ASTM C794 to determine whether priming and other specific joint preparation techniques are required to obtain rapid, optimum adhesion of joint sealants to joint substrates.

- 2. Compatibility Testing: Use ASTM C1087 to determine sealant compatibility when in contact with glazing and gasket materials.
- 3. Submit manufacturer's recommended number of pieces of each type of material, including joint substrates, joint-sealant backings, and miscellaneous materials.
- 4. Schedule sufficient time for testing and analyzing results to prevent delaying the Work
- 5. For materials failing tests, obtain joint-sealant manufacturer's written instructions for corrective measures, including use of specially formulated primers.
- 6. Testing will not be required if joint-sealant manufacturers submit data that are based on previous testing, not older than 24 months, of sealant products for adhesion to, staining of, and compatibility with joint substrates and other materials matching those submitted.
- B. Preconstruction Field-Adhesion Testing: Before installing sealants, field test their adhesion to Project joint substrates as follows:
 - 1. Locate test joints where indicated on Project or, if not indicated, as directed by Architect.
 - 2. Conduct field tests for each kind of sealant and joint substrate.
 - 3. Notify Architect seven days in advance of dates and times when test joints will be erected.
 - 4. Arrange for tests to take place with joint-sealant manufacturer's technical representative present.
 - a. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1.1 in ASTM C1193 or Method A, Tail Procedure, in ASTM C1521.
 - 1) For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 - 5. Report whether sealant failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. For sealants that fail adhesively, retest until satisfactory adhesion is obtained.
 - 6. Evaluation of Preconstruction Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing, in absence of other indications of noncompliance with requirements, will be considered satisfactory. Do not use sealants that fail to adhere to joint substrates during testing.

1.7 FIELD CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F (5 deg C).
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.

4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.8 WARRANTY

- A. Special Installer's Warranty: Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.
- C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:
 - 1. Movement of the structure caused by stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
 - 2. Disintegration of joint substrates from causes exceeding design specifications.
 - 3. Mechanical damage caused by individuals, tools, or other outside agents.
 - 4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 JOINT SEALANTS, GENERAL

- A. CalGreen Compliance: For all interior applications, refer to Section 018113,71 "Sustainable Design Requirements CalGreen Non-Residential Mandatory" for VOC limits, exclusions of toxic materials, documentation and compliance.
- B. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.
 - 1. Joint sealants at exterior shall be compatible with all components of the exterior waterproofing system that they contact.
- C. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 MILDEW-RESISTANT JOINT SEALANTS

- A. Mildew-Resistant Joint Sealants: Formulated for prolonged exposure to humidity with fungicide to prevent mold and mildew growth.
- B. Silicone, Mildew Resistant, Acid Curing, S, NS, 25, NT: Mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, nontraffic-use, acid-curing silicone joint sealant; ASTM C920, Type S, Grade NS, Class 25, Use NT.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Tremco Incorporated; Tremsil 200.
 - b. Sika Corporation; Sikasil-GP
 - c. Or approved equal

2.3 LATEX JOINT SEALANTS

- A. Acrylic Latex: Acrylic latex or siliconized acrylic latex, ASTM C834, Type OP, Grade NF.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Tremco Incorporated; Tremflex 834.
 - b. Sika Corporation; Sikacryl-20 FC
 - c. Or approved equal

2.4 JOINT-SEALANT BACKING

- A. Sealant Backing Material, General: Nonstaining; compatible with joint substrates, sealants, primers, and other joint fillers; and approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Adfast.
 - b. Alcot Plastics Ltd.
 - c. Construction Foam Products; a division of Nomaco, Inc.
 - d. Master Builders Solutions.
- B. Cylindrical Sealant Backings: ASTM C1330, Type C (closed-cell material with a surface skin) Type O (open-cell material) Type B (bicellular material with a surface skin) or any of the preceding types, as approved in writing by joint-sealant manufacturer for joint application indicated, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:

- a. Concrete.
- b. Unglazed surfaces of ceramic tile.
- 3. Remove laitance and form-release agents from concrete.
- 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Porcelain enamel.
 - d. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application, and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.

- 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint profile per Figure 8A in ASTM C1193 unless otherwise indicated.

3.4 FIELD QUALITY CONTROL

- A. Field-Adhesion Testing: Field test joint-sealant adhesion to joint substrates as follows:
 - 1. Extent of Testing: Test completed and cured sealant joints as follows:
 - a. Perform one test for each 1000 feet (300 m) of joint length thereafter or one test per each floor per elevation.
 - 2. Test Method: Test joint sealants according to Method A, Field-Applied Sealant Joint Hand Pull Tab, in Appendix X1 in ASTM C1193
 - a. For joints with dissimilar substrates, verify adhesion to each substrate separately; extend cut along one side, verifying adhesion to opposite side. Repeat procedure for opposite side.
 - 3. Inspect tested joints and report on the following:
 - a. Whether sealants filled joint cavities and are free of voids.
 - b. Whether sealant dimensions and configurations comply with specified requirements.
 - c. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each kind of product and joint substrate. Compare these results to determine if adhesion complies with sealant manufacturer's field-adhesion hand-pull test criteria.
 - 4. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant material, sealant configuration, and sealant dimensions.
 - 5. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.

B. Evaluation of Field-Adhesion-Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.6 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out, remove, and repair damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.7 INTERIOR JOINT-SEALANT SCHEDULE

- A. Interior sanitary joints between plumbing fixtures, food preparation fixtures, and casework and adjacent walls, floors, and counters.
 - 1. Joint Sealant: Mildew-Resistant, Single-Component, nonsag, acid-curing silicone joint sealant, Greenguard certified.
 - a. Treemo Incorporated; Tremsil 200 Sanitary.
 - b. Sika Corporation; Sikasil-GP
 - 2. Joint-Sealant Color: As selected by Architect from manufacturer's full range; multiple colors required.
- B. Interior non-moving joints between interior painted surfaces and adjacent materials.
 - 1. Joint Sealant: Siliconized acrylic latex, Greenguard certified
 - a. Tremco Tremflex 834
 - b. Sika Corporation; Sikacryl-20 FC
 - 2. Joint-Sealant Color: Paintable.

END OF SECTION 079200

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Interior gypsum board.
 - 2. Tile backing panels.
- B. Related Requirements:
 - 1. Section 093013 "Ceramic Tiling" for ceramic tile installed over tile backing panels.

1.2 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Mold-resistant gypsum board.
 - 2. Cementitious backer units.
 - 3. Interior trim.
 - 4. Exterior trim.
 - 5. Textured finishes.
- B. Samples: For the following products:
 - 1. Textured Finishes: Manufacturer's standard size for each textured finish indicated and on same backing indicated for Work.

1.3 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.4 FIELD CONDITIONS

- A. Environmental Limitations: Comply with ASTM C840 requirements or gypsum board manufacturer's written instructions, whichever are more stringent.
- B. Do not install panels that are wet, moisture damaged, and mold damaged.

- 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
- 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.2 INTERIOR GYPSUM BOARD

- A. Mold-Resistant Gypsum Board: ASTM C1396/C1396M. With moisture- and mold-resistant core and paper surfaces.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Georgia-Pacific Gypsum LLC; Mold-Guard Gypsum Board.
 - b. PABCO Gypsum; MOLD CURB® Plus.
 - c. USG Corporation; USG Sheetrock® Brand Mold Tough® Gypsum Panels.
 - 2. Core: As indicated.
 - 3. Long Edges: Tapered.
 - 4. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

2.3 EXTERIOR GYPSUM BOARD

- A. Cementitious Backer Units: ANSI A118.9 and ASTM C1288 or ASTM C1325, with manufacturer's standard edges.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Certainteed; SAINT-GOBAIN; FiberCement BackerBoard.
 - b. PermaBASE Building Products, LLC provided by National Gypsum Company; PermaBASE® Cement Board.
 - c. USG Corporation; USG Durock® Brand Cement Board.
 - 2. Thickness: As indicated.
 - 3. Mold Resistance: ASTM D3273, score of 10 as rated according to ASTM D3274.

2.4 TRIM ACCESSORIES

- A. Interior Trim: ASTM C1047.
 - 1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
 - 2. Shapes:
 - a. Cornerbead.
 - b. Bullnose bead.
 - c. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - d. L-Bead: L-shaped; exposed long flange receives joint compound.
 - e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
- B. Exterior Trim: ASTM C1047.
 - 1. Material: Hot-dip galvanized-steel sheet or rolled zinc.
 - 2. Shapes:
 - a. Cornerbead.
 - b. LC-Bead: J-shaped; exposed long flange receives joint compound.

2.5 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C475/C475M.
- B. Joint Tape:
 - 1. Interior Gypsum Board: Paper.
 - 2. Tile Backing Panels: As recommended by panel manufacturer.
- C. Joint Compound for Interior Gypsum Board: For each coat, use formulation that is compatible with other compounds applied on previous or for successive coats.
 - 1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 - 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
 - 3. Fill Coat: For second coat, use setting-type, sandable topping compound.
 - 4. Finish Coat: For third coat, use drying-type, all-purpose compound.
- D. Joint Compound for Tile Backing Panels:
 - 1. Cementitious Backer Units: As recommended by backer unit manufacturer.

2.6 AUXILIARY MATERIALS

- A. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written instructions.
- B. Steel Drill Screws: ASTM C1002 unless otherwise indicated.
 - 1. Use screws complying with ASTM C954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.

2.7 TEXTURE FINISHES

- A. Primer: As recommended by textured finish manufacturer.
- B. Non-Aggregate Finish: Premixed, vinyl texture finish for spray application.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. CertainTeed Corporation; Saint-Gobain North America; ProRoc Easi-Tex Spray Texture.
 - b. National Gypsum Company; ProForm® Quick SetTM Compound, Setting Type.
 - c. USG Corporation; BEADEX FasTex Wall and Ceiling Spray Texture.
 - d. Or approved equal
 - 2. Texture: Orange peel.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates including welded hollow-metal frames and support framing, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION AND FINISHING OF PANELS, GENERAL

A. Comply with ASTM C840.

- B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
- C. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- D. Form control and expansion joints with space between edges of adjoining gypsum panels.
- E. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- F. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide control joints to counteract wood shrinkage.

3.3 INSTALLATION OF INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:
 - 1. Mold-Resistant Type: As indicated on Drawings.
- B. Single-Layer Application:
 - 1. On partitions/walls, apply gypsum panels vertically (parallel to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
 - 2. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 INSTALLATION OF TILE BACKING PANELS

- A. Cementitious Backer Units: ANSI A108.11, at locations indicated to receive tile.
- B. Where tile backing panels abut other types of panels in same plane, shim surfaces to produce a uniform plane across panel surfaces.

3.5 INSTALLATION OF TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints at locations indicated on Drawings.
- C. Interior Trim: Install in the following locations:
 - 1. Cornerbead: Use at outside corners unless otherwise indicated.
 - 2. Bullnose Bead: Use where indicated.
 - 3. LC-Bead: Use at exposed panel edges.
 - 4. L-Bead: Use where indicated.
 - 5. U-Bead: Use where indicated.
 - 6. Curved-Edge Cornerbead: Use at curved openings.
- D. Exterior Trim: Install in the following locations:
 - 1. Cornerbead: Use at outside corners.
 - 2. LC-Bead: Use at exposed panel edges.

3.6 FINISHING GYPSUM BOARD

- A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.
- C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.
- D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C840:
 - 1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
 - 2. Level 2: Panels that are substrate for tile, acoustical tile, vinyl wall covering, tackable wall covering and where indicated on Drawings.
 - 3. Level 3: At substrates indicated to receive laminate wall covering and where indicated on Drawings.
 - 4. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.
 - a. Primer and its application to surfaces are specified in Section 099124 "Interior Painting."

- 5. Level 5: Kitchens, food prep areas, substrates to receive dry erase coatings and where indicated on Drawings.
 - a. Primer and its application to surfaces are specified in Section 099124 "Interior Painting."
- E. Cementitious Backer Units: Finish according to manufacturer's written instructions.

3.7 INSTALLATION OF TEXTURE FINISHES

- A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.
- B. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture free of starved spots or other evidence of thin application or of application patterns.
- C. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written instructions.

3.8 PROTECTION

- A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.
- B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- C. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 093013 - CERAMIC TILING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Ceramic mosaic tile.
- 2. Surface preparation materials
- 3. Setting materials
- 4. Waterproof membrane.
- 5. Grout materials
- 6. Flexible sealant.
- 7. Tile and grout sealers.
- 8. Metal edge strips.
- 9. Tile and grout maintenance, cleaners and grout haze removers.

B. Related Requirements:

- 1. Section 079200 "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.
- 2. Section 092900 "Gypsum Board" for cementitious backer board.

1.2 REFERENCES

A. American National Standards Institute (ANSI):

- 1. ANSI A108 Series/A118 Series American National Standards for Installation of Ceramic Tile.
- 2. ANSI A108.14 Installation of Paper-Faced Glass Mosaic Tile.
- 3. ANSI A108.15 Alternate Method: Installation of Paper-Faced Glass Mosaic Tile
- 4. ANSI A108.16 Installation of Paper-Faced, Back-Mounted, Edge-Mounted, or Clear Film Face-Mounted Glass Mosaic Tile.
- 5. ANSI A137.1 American National Standard for Ceramic Tile.
- 6. ANSI A137.2 American National Standard for Glass Tile.
- 7. ANSI A138.1 American National Standard Specifications for Green Squared Certification for Tiles and Installation Materials

B. ASTM International (ASTM):

- 1. ASTM A1064 Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
- 2. ASTM C645 Standard Specification for Nonstructural Steel Framing Members.

- 3. ASTM C1178 / C1178M Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel.
- 4. ASTM F1869 Standard test Method for Measuring Moisture Vapor-Emission Rate of Concrete Subfloor Using Anhydrous Chloride.
- 5. ASTM F2170 standard Test Method for determining relative humidity in Concrete Floor Slabs Using in situ Probes.
- C. Green Squared American National Standards Institute (ANSI) Material Specifications:
 - 1. ANSI A138.1 Sustainable Tiles, Glass Tiles, and Tile Installation Materials Version 2.
- D. TCNA (HB): Handbook for Ceramic Tile, Glass, and Stone Installations; Tile Council of North America.
- E. International Organization for Standardization (ISO):
 - 1. ISO 13007 Ceramic Tiles Grout and adhesives
- F. Leadership in Energy and Environmental Design (LEED®) U.S. Green Building Council.

1.3 DEFINITIONS

- A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 and ANSI 137.2 apply to Work of this Section unless otherwise specified.
- B. Face Size: Actual tile size, excluding spacer lugs.
- C. Module Size: Actual tile size plus joint width indicated.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades.
- B. Convene one week prior to commencing work of this section.
- C. Require attendance of installation material manufacturer, tile supplier, tile installer and installers of related work. Review installation procedures and coordination required with related work.
- D. Meeting agenda includes but is not limited to:
 - 1. Tile and installation material compatibility.
 - 2. Grouting procedure.

- 3. Maintenance and cleaning products and methods.
- 4. Surface preparation.

1.5 ACTION SUBMITTALS

- A. Product Data: Manufacturer's technical information for each type of product.
- B. Shop Drawings: Show locations of each type of tile, tile pattern and color arrangement. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates and finished tile surfaces. Show perimeter conditions, junctions with dissimilar materials, thresholds, ceramic accessories and setting details.
- C. Samples for Initial Selection: For tile, grout, and accessories involving color selection.
- D. Samples for Verification:
 - 1. Full-size units of each type and composition of tile and for each color and finish required. For ceramic mosaic tile in color blend patterns, provide full sheets of each color blend.
 - 2. Full-size units of each type of trim and accessory for each color and finish required.
 - 3. Metal edge strips in 6-inch (150-mm) lengths.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Manufacturer's Certificates: Certify that products meet or exceed specified requirements. When applicable, submit a Master Grade Certificate signed by the manufacturer and the installer certifying that products meet or exceed the specified requirements of ANSI A137.1, ANSI A137.2, and/or ANSI A137.3.
- C. Product Certificates: For each type of product.
- D. Product Test Reports: For tile-setting and -grouting products and certified porcelain tile.
- E. Installation Instructions: Manufacturer's printed instructions for each product.
- F. Maintenance Data: Include recommended cleaning methods, cleaning materials, and maintenance coatings.

1.7 QUALITY ASSURANCE

- A. Installer Qualifications:
 - 1. Engage an experienced installer who has completed tile installations similar in material, design, and extent to that indicated for this project and with a record of

- successful in-service performance. Installer to have a minimum of five years' experience.
- 2. Installer employs Ceramic Tile Education Foundation Certified Installers or installers recognized by the U.S. Department of Labor as Journeyman Tile Layers.
- B. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.
- B. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.
- C. Protect setting materials from freezing and overheating in accordance with manufacturer's instructions.
- D. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
- E. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.
- F. Store liquid materials in unopened containers and protected from freezing.
- G. Do not use frozen materials unless specifically allowed by manufacturer.
- H. Deliver and store materials on site at least 24 hours before work begins.
- I. Provide heated and dry storage facilities on site.

1.9 FIELD CONDITIONS

- A. Comply with requirements of referenced standards and recommendations of material manufacturers for environmental conditions before, during, and after installation.
- B. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.
- C. For exterior applications:
 - 1. Maintain substrate and ambient temperatures in tiled areas between 50°F and 95°F (10°C and 35°C) during installation and for at least 7 days after completion, unless

otherwise indicated in the product instructions and/or ANSI A108 installation standards.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Tile: Obtain tile from single source or producer.
 - 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.
- B. Source Limitations for Setting and Grouting Materials: Ensure Single-Source Warranty Requirements and Compatibility of Products: Provide cleaners, sealing and maintenance products, tile grout, setting materials, underlayments, patching, leveling and rendering material, additives, accessories and factory-prepared dry-set mortars from the same manufacturer.

2.2 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
 - 1. Provide tile complying with Standard grade requirements unless otherwise indicated.
- B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.
- C. Colors, Textures, and Patterns: Where manufacturer's standard products are indicated for tile, grout, and other products requiring selection of colors, surface textures, patterns, and other appearance characteristics, provide specific products or materials complying with the following requirements:
 - 1. As selected by Architect from manufacturer's full range.
- D. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
- E. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.
 - 1. Where tile is indicated for installation on exteriors or in wet areas, do not use backor edge-mounted tile assemblies unless tile manufacturer specifies in writing that

this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

F. Factory-Applied Temporary Protective Coating: Where indicated under tile type, protect exposed surfaces of tile against adherence of mortar and grout by precoating with continuous film of petroleum paraffin wax, applied hot. Do not coat unexposed tile surfaces.

2.3 TILE PRODUCTS

- A. Ceramic Tile Type: Factory-mounted unglazed ceramic mosaic tile for wet areas (i.e. Showers, Locker Rooms)
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. American Olean; a division of Dal-Tile Corporation.
 - b. Daltile.
 - c. Interceramic.
 - 2. Composition: Porcelain.
 - 3. Module Size: 1 by 1 inch (25.4 by 25.4 mm).
 - 4. Thickness: 1/4 inch (6.4 mm).
 - 5. Face: Matte
 - 6. Surface: Slip resistant, with abrasive admixture.
 - 7. Dynamic Coefficient of Friction: Not less than 0.42.
 - 8. Tile Color and Pattern: As selected by Architect from manufacturer's full range.
 - 9. Grout Color: As selected by Architect from manufacturer's full range.
 - 10. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, selected from manufacturer's standard shapes:
- B. Ceramic Mosaic Trim Units: Matching characteristics of adjoining flat tile and coordinated with sizes and coursing of adjoining flat tile where applicable. Provide shapes as follows, selected from manufacturer's standard shapes:
 - 1. Base Cap for Thin-Set Mortar Installations: Surface bullnose.
 - 2. Wainscot Cap for Thin-Set Mortar Installations: Surface bullnose.
 - 3. Sizes For Trim Shapes: As indicated, coordinated with sizes and coursing of adjoining flat tile, where applicable.

2.4 SURFACE PREPARATION MATERIALS

- A. Trowelable Floor/Wall Patch and Render Mortar: Quick-setting, polymer-modified, fiber-reinforced, cementitious rendering, patching, ramping and leveling mortar. Can be applied from 1/8 inch to 1-1/4 inches (3 mm to 3.2 cm).
 - 1. Products: Subject to compliance with requirements, provide one of the following:

- a. MAPEI, Planitop 330 Fast.
- b. Custom Building Products.
- c. Laticrete International, Inc.; Quick Cure Mortar Bed

2.5 MORTAR-BED/RENDERING MORTAR MATERIALS

- A. Portland Cement Mortar (Thickset) Installation Materials: ANSI A108.02.
- B. Thick-Bed (Dry-Pack) and Render Mortar: Pre-blended mixture of finely graded sand and Portland cement; can be applied at 3/8 inch to 3 inches (10 mm to 7.5 cm). Products: Subject to compliance with requirements, provide one of the following:
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. MAPEI Corporation; 4 to 1 Mud Bed Mix with MAPEI, Planicrete AC (admixture), ANSI A108.1B.
 - b. Custom Building Products.
 - c. Laticrete International, Inc.; 209 Mud bed with 3701 Admix or 3701 fortified mortar bed.
- C. Render Mortar: Quick-setting, polymer-modified, fiber-reinforced, cementitious rendering, patching, ramping and leveling mortar; can be applied from 1/8 inch to 1-1/4 inches (3 mm to 3.2 cm).
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. MAPEI Corporation; Planitop 330 Fast
 - b. Custom Building Products.
 - c. Laticrete International, Inc.; Quick Cure Mortar Bed

2.6 THINSET SETTING MATERIALS

- A. Improved Modified Dry-Set Cement Bonding Mortar: ANSI A118.4E and ISO 13007 C2TEP1.
 - 1. Products: Subject to compliance with requirements, provide one of the following products:
 - a. Schluter; ALL-SET
 - b. MAPEI Corporation; Keraflex SG
 - c. Custom Building Products.
 - d. Laticrete International, Inc.; 254 Platinum
 - 2. Provide prepackaged, dry-mortar mix containing dry, redispersible, vinyl acetate or acrylic additive to which only water must be added at Project site.

2.7 WATERPROOF AND CRACK-SUPPRESSION MEMBRANE

- A. General: Manufacturer's standard product that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
- B. Flexible Polyethylene Sheet Membrane: Nonwoven, polypropylene fabric on both sides, used for both waterproofing and crack-isolation in interior/exterior residential and commercial applications, ANSI A118.10 and ANSI A118.12.
 - 1. Products: Subject to compliance with requirements, provide one of the following products:
 - a. Schluter Systems; KERDI
 - b. Or approved equal
 - 2. Furnish all accessories necessary to create a waterproof system, including, but not limited to: sealing tape, pre-formed inside corners and outside corners, pipe collars and valve collars.

2.8 GROUT MATERIALS

- A. High-Performance Tile Grout: ANSI A118.7 and ISO CG2WA.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Basis of Design: Custom Building Products; Fusion Pro® Single Component® Grout
 - b. MAPEI Corporation; Ultracolor Plus FA
 - c. Laticrete International, Inc.; Permacolor Grout

2.9 FLEXIBLE SEALANT

- A. 100%-Silicone Sealant: Heavy-traffic expansion and movement joints, horizontal and vertical complying with ASTM standards; ASTM: Meets C920, Type S, Grade NS, Glass 25, Use T1, T2, NT, I, M, G, A and O, and conforms to C794 adhesion properties, (#23 clear meets ASTM C920, Type S, Grade NS, Class 50, use NT).
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. MAPEI Corporation; Mapesil T
 - b. Custom Building Products.
 - c. Laticrete International, Inc.; Latasil

2.10 PENETRATING TILE, STONE AND GROUT SEALERS

- A. Solvent-Based Penetrating Sealer: Natural-look, providing maximum protection against most common stains. For use on interior and exterior natural stone (marble, limestone, sandstone, slate, granite, travertine, etc.), unglazed porcelain and ceramic tiles, masonry, quarry tiles and cement grout. Can also be used as a pre-grouting sealer.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. MAPEI Corporation; UltraCare Penetrating SB Stone, Tile and Grout Sealer
 - b. Custom Building Products.
 - c. Laticrete International, Inc.; Stonetech Impregnator

2.11 MISCELLANEOUS MATERIALS

- A. Temporary Protective Coating: Manufacturer's standard proprietary liquid coating that is specially formulated and recommended for use as temporary protective coating for tile to protect exposed surfaces of tile against adherence of mortar and grout; compatible with tile, mortar, and grout products; and easily removable after grouting is completed without damaging grout or tile.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. MAPEI Corporation; UltraCare Concentrated Tile & Grout Release
 - b. Custom Building Products.
 - c. Laticrete International, Inc.; Stonetech Grout Release
- B. Metal Edge Strips: Angle or L-shaped, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring applications; stainless steel, ASTM A276/A276M or ASTM A666, 300 Series exposed-edge material.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by the following:
 - a. Schluter Systems L.P.
 - b. Or approved equal
- C. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.
- D. Grout Sealer: Manufacturer's standard silicone product for sealing grout joints that does not change color or appearance of grout.
 - 1. Products: Subject to compliance with requirements, provide one of the following:

- a. MAPEI Corporation; Ultracare Grout Sealer
- b. <u>Custom Building Products</u>; Grout and Tile Sealer.

2.12 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

2.13 ACCESSORIES

- A. Joint Backing: ASTM D1056; round, closed cell polyethylene foam rod; oversized 25 percent larger than joint width.
- B. Bond Breaker Tape: Pressure sensitive tape recommended by sealant manufacturer to suit application. Apply to bottom of joints that are too shallow to receive foam backer rod.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work. Refer to ANSI A108.01, ANSI A108.02 and if applicable ANSI A108.19 and/or ANSI A108.20.
 - 1. Do not proceed with tilework until surfaces and conditions comply with requirements indicated in reference tile installation standard and manufacturer's printed instructions.
 - 2. When underlayment, patching, leveling and rendering materials are needed, they must be from the supplier of the setting materials. For improved warranty and single-source responsibility.
 - 3. When using tiles with all edges shorter than 15 inches (38 cm) in length, the maximum allow-able variation in the substrate is 1/4 in 10 feet (6 mm in 3.05 m) from the required plane, with no more than 1/16 inch variation in 12 inches (1.5 mm in 30 cm) when measured from the high points in the surface.
 - 4. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other

substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.

- 5. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
- 6. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.
- B. Field-Applied Temporary Protective Coating: Where indicated under tile type or needed to prevent grout from staining or adhering to exposed tile surfaces, precoat them with continuous film of temporary protective coating, taking care not to coat unexposed tile surfaces.

3.3 INSTALLATION OF CERAMIC TILE

- A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- E. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.
- F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to

minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.

- 1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
- G. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
 - 1. Ceramic Mosaic Tile: 1/16 inch (1.6 mm).
- H. Metal Edge Strips: Install where exposed edge of tile flooring meets carpet, wood, or other flooring that finishes flush with or below top of tile and no threshold is indicated.
- I. Floor Sealer: Apply floor sealer to grout joints in tile floors according to floor-sealer manufacturer's written instructions. As soon as floor sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

3.4 WALL TILE INSTALLATION

- A. Install tile in accordance with manufacturer's printed instructions and the applicable requirements of TCNA methods referenced in the Schedule and the ANSI A108 Series for the materials being used.
- B. Apply waterproof membrane only in dry weather, when ambient and substrate temperatures are above 40°F (4°C).
- C. Waterproofing: Install necessary components to form a watertight installation. Dry film thickness (DFT) must comply with manufacturer's recommendations.
- D. Joint Widths: Install tile on walls with the following joint widths:
 - 1. Ceramic Mosaic Tile: 1/16 inch.
- E. Apply tile and grout cleaners, sealers and maintenance products in accordance with manufacturer's printed instructions and technical data sheets.
- F. Grout joints in accordance with manufacturer's instructions and ANSI A108.10 and ANSI A108.6.
- G. Remove standing water, dust and foreign substances from joints to be grouted.
- H. Clean and dry tile surfaces.
- I. After grouting, remove all grout residue promptly.

3.5 ADJUSTING AND CLEANING

- A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.
- B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
 - 1. Remove grout residue from tile as soon as possible.
 - 2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

3.6 PROTECTION

- A. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.
- B. Walls: Protect from impact, vibration, and heavy hammering on adjacent and opposite walls for 14 days after installation.
- C. Protect from freezing and total water immersion for at least 21 days after installation.
- D. Protect installed tile work from damages by other trades and general abuse until substantial work completion and acceptance.
- E. Refer to manufacturer of setting materials product data sheets for recommended protection.
- F. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.7 EXTERIOR CERAMIC TILE INSTALLATION SCHEDULE

- A. Exterior Wall Installations, Solid Backing:
 - Ceramic Tile Installation: Exterior wall installation over solid backing; metal lath, cement bonding mortar (thin set) and waterproof membrane. Install tile according to TCNA W224E-11 and applicable requirements of ANSI A108 Series for the materials being used.
 - a. Ceramic Tile Type: Unglazed ceramic mosaic

- b. Grout: High-performance sanded grout.
- c. Cementitious Bond Coat: Improved modified dry-set mortar.
- d. Waterproof Membrane: Sheet
- e. Cement Bonding Morter: Improved Modified Dry-Set Cement Bonding Mortar per ANSI A118.4E and ISO 13007 C2TEP1.

END OF SECTION 093013

SECTION 099124 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on interior substrates.
 - 1. Gypsum board.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
 - 1. Indicate VOC content.
- B. Samples for Initial Selection: For each type of topcoat product.
- C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 - 2. Apply coats on Samples in steps to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- D. Product List: Use same designations indicated on Drawings and in the Interior Painting Schedule to cross-reference paint systems specified in this Section. Include color designations.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.5 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures of less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. <u>Manufacturers:</u> Subject to compliance with requirements, provide products by one of the following:
 - 1. <u>Basis of Design: Dunn-Edwards Corporation (a Nippon Paint Holdings Co. Ltd.</u> company).
 - 2. Kelly-Moore Paint Company Inc.
 - 3. Sherwin-Williams Company (The).
- B. Source Limitations: Obtain paint from single source from single manufacturer.

2.2 PAINT, GENERAL

- A. Material Compatibility:
 - 1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- B. Colors: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

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- 1. Gypsum Board: 12 percent.
- C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- E. Proceed with coating application only after unsatisfactory conditions have been corrected.
 - 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

3.3 INSTALLATION

- A. Apply paints according to manufacturer's written instructions.
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
 - 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.
 - 6. For previously painted or factory primed surfaces where bare substrate is exposed, spot prime with manufacturer recommended primer.

- 7. Previously painted surfaces may require full prime and is subject to field inspection and recommendations.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Fire-Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
 - 1. Paint the following work where exposed in equipment rooms:
 - a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Tanks that do not have factory-applied final finishes.
 - h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - 2. Paint the following work where exposed in occupied spaces:
 - a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - h. Other items as directed by Architect.
 - 3. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

- A. Dry-Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry-film thickness.
 - 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 - 2. If test results show that dry-film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry-film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
 - 1. Do not clean equipment with free-draining water and prevent solvents, thinners, cleaners, and other contaminants from entering into waterways, sanitary and storm drain systems, and ground.
 - 2. Dispose of contaminants in accordance with requirements of authorities having jurisdiction.
 - 3. Allow empty paint cans to dry before disposal.
 - 4. Collect waste paint by type and deliver to recycling or collection facility.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

- A. Gypsum Board and Plaster Substrates:
 - 1. Latex over Latex Sealer System:
 - a. Prime Coat: Primer sealer, latex, interior.
 - 1) Dunn Edwards VINYLASTIC Select Interior Wall Sealer (VNSL00).
 - 2) S-W ProMar 200 Zero VOC Primer (B28W02600).
 - 3) KM 971 Acryplex Low VOC Interior PVA Primer/Sealer

- 4) Or approved equal
- b. Prime Coat: Latex, interior, matching topcoat.
- c. Intermediate Coat: Latex, interior, matching topcoat.
- d. Topcoat: Latex, interior, flat. At all ceilings, unless otherwise noted.
 - 1) Dunn Edwards SPARTAZERO Interior Flat Paint (SZRO10).
 - 2) ProMar 200 Ceiling Paint Flat (A27W05050).
 - 3) KM 1005 Premium Professional Low VOC Interior Flat
 - 4) Or approved equal
- e. Topcoat: Latex, interior. At all walls, unless otherwise noted.
 - 1) Dunn Edwards SPARTAWALL, Interior Eggshell Paint (SWLL30).
 - 2) S-W ProMar 200 Zero VOC Latex Eg-Shel (B20-12600 Series).
 - 3) KM 1010 Premium Professional Low VOC Interior Eggshell Enamel
 - 4) Or approved equal
- f. Topcoat: Latex, interior, semigloss. At all restroom walls and ceilings, unless otherwise noted.
 - 1) SPARTAWALL, Interior Semi-Gloss Paint (SWLL50).
 - 2) S-W ProMar 200 Zero VOC Semi-gloss (B31W2600).
 - 3) KM 1050 Premium Professional Low VOC Interior Semi-Gloss Enamel
 - 4) Or approved equal

END OF SECTION 099124

SECTION 099300 - STAINING AND TRANSPARENT FINISHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Wood stains.
- 2. Transparent finishes.

1.2 ACTION SUBMITTALS

A. Product Data:

- 1. For each type of product.
- 2. Include preparation requirements and application instructions.
- 3. Indicate VOC content.
- B. Samples for Initial Selection: Manufacturer's standard color sheets, showing full range of available colors for each type of exposed finish.
- C. Samples for Verification: Sample for each type of finish system and in each color and gloss of finish required on representative samples of actual wood substrates.
 - 1. Size: 8 inches (200 mm) square or 8 inches (200 mm) long.
 - 2. Apply coats on Samples in steps to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- D. Product List: Cross-reference to finish system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.3 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.4 FIELD CONDITIONS

- A. Apply finishes only when temperature of surfaces to be finished and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply finishes when relative humidity exceeds 85 percent, at temperatures of less than 5 deg F (3 deg C) above the dew point, or to damp or wet surfaces.
- C. Do not apply exterior finishes in snow, rain, fog, or mist.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Gemini Coatings
- B. Cabot Premium Wood Care
- C. Or approved equal

2.2 SOURCE LIMITATIONS

A. Source Limitations: Obtain each coating product from single source from single manufacturer.

2.3 MATERIALS, GENERAL

A. Material Compatibility:

1. Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Exterior Wood Substrates: 15 percent, when measured with an electronic moisture meter.

2 - 099300 STAINING AND TRANSPARENT FINISHING

- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Proceed with finish application only after unsatisfactory conditions have been corrected.
 - 1. Beginning finish application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Remove hardware, covers, plates, and similar items already in place that are removable. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and finishing.
 - 1. After completing finishing operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- B. Clean and prepare surfaces to be finished according to manufacturer's written instructions for each substrate condition and as specified.
 - 1. Remove dust, dirt, oil, and grease by washing with a detergent solution; rinse thoroughly with clean water and allow to dry. Remove grade stamps and pencil marks by sanding lightly. Remove loose wood fibers by brushing.
 - 2. Remove mildew by scrubbing with a commercial wash formulated for mildew removal and as recommended by stain manufacturer.

C. Exterior Wood Substrates:

- 1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
- 2. Prime edges, ends, faces, undersides, and backsides of wood.
 - a. For solid hide stained wood, stain edges and ends after priming.
 - b. For varnish-coated stained wood, stain edges and ends and prime with varnish. Prime undersides and backsides with varnish.
- 3. Countersink steel nails, if used, and fill with putty or plastic wood filler tinted to final color. Sand smooth when dried.

3.3 APPLICATION

- A. Apply finishes according to manufacturer's written instructions.
 - 1. Use applicators and techniques suited for finish and substrate indicated.
 - 2. Finish surfaces behind movable equipment and furniture same as similar exposed surfaces.

- 3. Do not apply finishes over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- B. Apply finishes to produce surface films without cloudiness, holidays, lap marks, brush marks, runs, ropiness, or other surface imperfections.

3.4 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing finish application, clean spattered surfaces. Remove spattered materials by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from finish application. Correct damage by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced finished wood surfaces.

3.5 EXTERIOR WOOD-FINISH-SYSTEM SCHEDULE

- A. Wood Substrates, Wood Planks and Trim:
 - 1. Water-Based Clear Wood Protection System:
 - a. Prime Coat: Water-based wood protector matching topcoat.
 - b. Intermediate Coat: Water-based protector matching topcoat.
 - c. Topcoat: Water-based Clear Wood Protection
 - 1) Cabot Clear Wood Protector #2101 Series.

END OF SECTION 099300

SECTION 101423.16 - SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes:
 - 1. Toilet Room Signs

1.3 DEFINITIONS

A. Accessible: In accordance with the accessibility standard.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For each type of sign.
 - 1. Include fabrication and installation details and attachments to other work.
 - 2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
 - 3. Show message list, typestyles, graphic elements, including raised characters and Braille, and layout for each sign at least half size.
- C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.
 - 1. Include representative Samples of available typestyles and graphic symbols.
- D. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), in manufacturer's standard size unless otherwise indicated and as follows:
 - 1. For each type of signs: Full-size Sample.
 - 2. Exposed Accessories: Half-size Sample of each accessory type.
 - 3. Full-size Samples, if approved, will be returned to Contractor for use in Project.

E. Product Schedule: Including each type of sign. Use same designations indicated on Drawings or specified.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Sample Warranty: For special warranty.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For signs to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- B. Regulatory Requirements: Comply with the Americans with Disabilities Act (ADA); CAC, Title 24, 2019 CBC Chapters 10 & 11B and with code provisions as adopted by authorities having jurisdiction. Code-governed signs shall be field inspected per CBC 11B-703.1.1.2.
- C. Inspection: Tactile signs shall be field inspected for compliance after installation per CBC 11B-703.1.1.2.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Package signs as required to prevent damage before installation.
- B. Package room and door signs in sequential order of installation, labeled by floor or building.
- C. Store tape adhesive at room temperature.

1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image.
 - c. Separation or delamination of sheet materials and components.

2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design" and 2019 CBC.
 - 1. Provide non-glare finish with characters contrasting with background per 11B-703.5.1.

2.2 TOILET ROOM SIGNAGE

- 1. Cast Acrylic Sheet, ¹/₄" thick
- 2. Frame: Entire perimeter at ADA signs; unframed at door mounted signs.
 - a. Material: Aluminum.
 - b. Material Thickness: 1/4" thick.
 - c. Profile: Square.
 - d. Corner Condition in Elevation: Square.
 - e. Finish and Color: Clear anodized.

3. Size:

- a. "Men" or "Boys" Equilateral triangle, 12 inches on a side, door mounted
- b. "Women" or "Girls" Circle, 12 inches in diameter, door mounted
- c. "All-Gender" Equilateral triangle superimposed over a 12 inch circle, door mounted
- d. ADA Signage: 6" by 6" Mounted at 5'-0" AFF on wall at latch side of door
- 4. Mounting: Exposed mechanical fasteners. Use nonremovable exposed stainless steel vandelproof mechanical fasteners placed through predrilled holes in aluminum frames and through face of sign into solid backing.
- 5. Text and Typeface:
 - a. Character Font: Helvetica
 - b. Character Height: 1 inch
 - c. Character Case: Upper case only
 - d. Character Color: Finish raised characters to contrast with background color, and finish Braille to match background color.
 - e. Background color: As selected from manufacturer's full range of available colors

B. Toilet Room Signage Applications

1. Identify with pictograms, the names as indicated on the drawings and braille. Room Numbers to be confirmed with architect and owner prior to fabrication.

2.3 SIGN MATERIALS

- A. Aluminum Sheet and Plate: ASTM B209 (ASTM B209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
- B. Aluminum Extrusions: ASTM B221 (ASTM B221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
- C. Laminated Impact Acrylic Sheet with contarsting ply:
 - 1. Manufacturer: Rowmark "Ultramattes Reverse"
 - 2. Finish: Matte non-glare
 - 3. Engraving Depth: 0.012" / 0.30mm
- D. Modified Acrylic
 - 1. Manufacturer: Rowmark "ADA Alternative Applique"
 - 2. Finish: Matte non-glare
 - 3. Thickness: 1/8"
- E. Cast Acrylic Sheet
 - 1. Manufacturer: Rowmark "ColorCast"
 - 2. Finish: Matte non-glare
 - 3. Thickness: ¹/₄"

2.4 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following:
 - 1. Exposed Mechanical Fasteners: Nonremovable exposed stainless steel vandelproof mechanical fasteners placed through pre-drilled holes in aluminum framed and through face of sign into solid backing.
 - 2. Where panel signs are schedule or indicated to be mounted on glass, provide matching plate on opposite side of glass to conceal mounting materials.
- B. Two-Face Tape: Manufacturer's standard high-bond, foam-core tape, 0.045 inch (1.14 mm) thick, with adhesive on both sides.

2.5 FABRICATION

A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.

- 1. Preassemble signs and assemblies in the shop to greatest extent possible. Disassemble signs and assemblies only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation; apply markings in locations concealed from view after final assembly.
- 2. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
- 3. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
- 4. Provide rabbets, lugs, and tabs necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.

2.6 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.7 ALUMINUM FINISHES

A. Clear Anodic Finish: AAMA 611, Class I, 0.018 mm or thicker.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
 - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - 2. Install signs so they do not protrude or obstruct according to the accessibility standard.
 - 3. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
- B. Accessibility: Install signs in locations on walls as indicated on Drawings and according to the accessibility standard.
- C. Mounting Methods:

- 1. Through Fasteners: Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.
- 2. Adhesive: Clean bond-breaking materials from substrate surface and remove loose debris. Apply linear beads or spots of adhesive symmetrically to back of sign and of suitable quantity to support weight of sign after cure without slippage. Keep adhesive away from edges to prevent adhesive extrusion as sign is applied and to prevent visibility of cured adhesive at sign edges. Place sign in position, and push to engage adhesive. Temporarily support sign in position until adhesive fully sets.

3.2 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101423.16

SECTION 102800 - TOILET, BATH, AND LAUNDRY ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Public-use shower room accessories.

1.2 COORDINATION

- A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
- B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
 - 2. Include anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
- B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.
 - 1. Identify locations using room designations indicated.
 - 2. Identify accessories using designations indicated.

1.4 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For manufacturer's special warranties.

1.5 QUALITY ASSURANCE

A. Source Limitations: Provide products of same manufacturer for each type of accessory unit and for units exposed to view in same areas, unless otherwise approved by Architect.

- B. Product Options: Accessory requirements, including those for materials, finishes, dimensions, capacities, and performance, are established by specific products indicated in the Toilet and Bath Accessory Schedule.
 - 1. Products of other manufacturers listed in Part 2 with equal characteristics, as judged solely by Architect, may be provided.
 - 2. Do not modify aesthetic effects, as judged solely by Architect, except with Architect's approval. Where modifications are proposed, submit comprehensive explanatory data to Architect for review.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For accessories to include in maintenance manuals.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Design accessories and fasteners to comply with the following requirements:
 - 1. Grab Bars: Installed units are able to resist 250 lbf (1112 N) concentrated load applied in any direction and at any point.
 - 2. Shower Seats: Installed units are able to resist 360 lbf (1601 N) applied in any direction and at any point.

2.2 PUBLIC-USE WASHROOM ACCESSORIES

- A. Source Limitations: Obtain public-use washroom accessories from single source from single manufacturer.
- B. Grab Bar:
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Bobrick Washroom Equipment, Inc; B-5806
 - 2. Mounting: Flanges with concealed fasteners.
 - 3. Material: Stainless steel, 0.05 inch (1.3 mm) thick.
 - a. Finish: Smooth, ASTM A480/A480M No. 4 finish (satin).
 - 4. Outside Diameter: 1-1/4 inches (32 mm).
 - 5. Configuration and Length: As indicated on Drawings.

2.3 PUBLIC-USE SHOWER ROOM ACCESSORIES

- A. Source Limitations: Obtain public-use shower room accessories from single source from single manufacturer.
- B. Folding Shower Seat:
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. Bobrick Washroom Equipment, Inc; B-918116 (Left Hand)
 - 2. Configuration: L-shaped seat, designed for wheelchair access.
 - 3. Seat: 3/8" thick, high pressure laminate with matte-finish, white-colored surfaces and black phenolic-resin core with integral slots for water drainage.
 - 4. Frame: Zinc-plated 3/4" steel pipe with 1/10" wall thickness and 1/8" white vinyl antibacterial, biocompatible, warm-to-the-touch coating.
 - 5. Mounting Mechanism: Inox AISI 304, Stainless steel, ASTM A480/A480M No. 4 finish (satin).

2.4 MATERIALS

- A. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, 0.031-inch- (0.8-mm-) minimum nominal thickness unless otherwise indicated.
- B. Steel Sheet: ASTM A1008/A1008M, Designation CS (cold rolled, commercial steel), 0.036-inch- (0.9-mm-) minimum nominal thickness.
- C. Galvanized-Steel Sheet: ASTM A653/A653M, with G60 (Z180) hot-dip zinc coating.
- D. Galvanized-Steel Mounting Devices: ASTM A153/A153M, hot-dip galvanized after fabrication.
- E. Fasteners: Screws, bolts, and other devices of same material as accessory unit, unless otherwise recommended by manufacturer or specified in this Section, and tamper and theft resistant where exposed, and of stainless or galvanized steel where concealed.

2.5 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
 - 1. Remove temporary labels and protective coatings.
- B. Grab Bars: Install to comply with specified structural-performance requirements.
- C. Shower Seats: Install to comply with specified structural-performance requirements.

3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Clean and polish exposed surfaces according to manufacturer's written instructions.

END OF SECTION 102800

SECTION 131102 – SWIMMING POOL CONCRETE

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Forming for cast-in-place concrete associated with the swimming pool and pool decks.
- B. Reinforcement for cast-in-place concrete associated with the swimming pool and pool decks.
- C. Cast-in-place concrete for the swimming pool structures. Do not use water proofing admixture of any kind.
- D. Cast-in-place concrete for swimming pool decks with Xypex C-500 crystalline waterproofing admixture. Waterproofing admixture for swimming pool decks only.
- E. Provide labor, materials and equipment as required to install sealant for al pool deck expansion joints, or any other caulking, as indicated on the aquatic drawings and herein specified.

1.2 QUALITY ASSURANCE

A. Qualifications of Workers:

- 1. The entity performing the work of this Section shall have been successfully engaged in the respective trade for at least five (5) years immediately prior to commencement of the Work.
- 2. For actual construction operations, use only trained and experienced workers with a minimum of three (3) years experience with the materials and methods specified.
- 3. Provide at least one person who shall be present at all times during execution of the work of this Section, with a minimum of five (5) years experience with the type of materials being installed, the referenced standards, and who shall direct all Work performed under this Section.

B. Standards:

- 1. In addition to complying with the 2019 California Building Code, comply with all pertinent recommendations contained in "Guide to Formwork for Concrete" Publication ACI 347R-14 of the American Concrete Institute.
- 2. In addition to complying with the 2019 California Building Code, comply with all pertinent recommendations contained in "Guide to Presenting Reinforcing Steel Design Details," Publication ACI 315R-18 of the American Concrete Institute.

- 3. In addition to complying with all local codes and regulations, comply with all pertinent recommendations contained in American Society for Testing and materials (ASTM); ASTM C 920 "Standard Specification for Elastometric Joint Sealants."
- C. Tolerances: Construct all swimming pool concrete straight, true, plumb and square within a tolerance horizontally of one in 200 and vertically of one in 2000.

1.3 SUBMITTAL AND SUBSTITUTIONS

- A. Provide submittals in conformance with the requirements of Section 01 33 00.
- B. Samples and Certificates, Concrete Reinforcement:
 - 1. Provide all data and access required for testing as described in Section 01 45 00 of the Specifications.
 - 2. All material shall bear mill tags with heat number identification. Mill analysis and report shall be made available upon request.
 - 3. Rebar samples shall be taken from bundles as delivered from the mill with the bundles identified as to heat number and the accompanying mill certificate. One tensile test and one bend test shall be made from a sample from each 10 tons or fraction thereof of each size of reinforcing steel.
 - 4. Design mix from batch plant demonstrating previous use history and associated strengths at 28 days.
 - 5. The Contractor shall submit a mix design stamped and signed by a licensed engineer for approval by the Owner's Representative prior to any placement of concrete.
 - 6. The Contractor shall submit a separate mix design stamped and signed by a licensed engineer for the swimming pool decks which contains the specified Xypex C-500 crystalline waterproofing admixture for approval by the Owner's Representative prior to any placement of concrete.
- C. Submit proof of qualifications as specified in Article 1.2.A of this Section.
- D. Submit reinforcing shop drawings for pool walls, gutters, floors, dike walls and balance tanks, etc. as shown on the construction drawing.

1.4 PRODUCT HANDLING

- A. Delivery: Deliver materials to the Project Site in the manufacturer's original unopened containers with all labels intact and legible.
- B. Storage: Store materials under cover in a manner to prevent damage and contamination, and store only the specified materials at the Project Site.

- C. Protection: Use all means necessary to protect the swimming pool concrete before, during, and after installation and to protect the installed Work specified in other Sections.
- D. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner.

PART 2 - PRODUCTS

2.1 CONCRETE FORMWORK

A. Form Materials:

- 1. Form Lumber: All form lumber in contact with exposed concrete shall be new except as allowed for reuse of forms in Part 3 of this Section, and all form lumber shall be one of the following, a combination thereof, or an equal approved in advance by the Owner's Representative.
 - a. "Plyform," Class I or II, bearing the label of the Douglas Fir Plywood Association; "Inner-Seal" Form as manufactured by Louisiana-Pacific, or approved equal.
 - b. Douglas Fir-Larch, number two grade, seasoned, surfaced four sides.
- 2. Form Release Agent: Colorless, non-staining, free from oils; chemically reactive agent that shall not impair bonding of paint or other coatings intended for use.

B. Ties and Spreaders:

- 1. Type: All form ties shall be a type which do not leave an open hole through the concrete and which permits neat and solid patching at every hole.
- 2. Design: When forms are removed, all metal reinforcement shall be not less than two (2) inches from the finished concrete surface.
- 3. Wire Ties and Wood Spreaders: Do not use wire ties or wood spreaders.
- C. Alternate Forming Systems: Alternate forming systems may be used subject to the advance approval of the Owner's Representative.

2.2 CONCRETE REINFORCEMENT

- A. Bars for reinforcement shall conform to "Specifications for Deformed Carbon-Steel Bars for Concrete Reinforcement," ASTM A-615, Grade 60.
- B. Wire Fabric: Wire fabric shall conform to "Specifications for Carbon Steel Wire and Welded Wire Reinforcement, Plain and Deformed for Concrete," ASTM A 1064.

C. Tie Wire: Tie wire for reinforcement shall conform to "Specifications for Carbon Steel Wire and Welded Wire Reinforcement, Plain and Deformed for Concrete," ASTM A 1064 black annealed 16-gauge tie wire.

2.3 CAST-IN-PLACE CONCRETE

A. Concrete:

- 1. All concrete, unless otherwise specifically permitted by the Owner's Representative, shall be transit-mixed in accordance with ASTM C94. Concrete for water retaining structures that do not receive a waterproofing finish such as ceramic tile or swimming pool plaster shall receive a topical waterproofing finish.
- 2. The control of concrete production shall be under the supervision of a recognized testing agency, selected by the Owner.
- 3. Quality: All concrete shall have the following minimum compressive strengths at twenty-eight (28) days and shall be proportioned within the following limits:
 - a. 4,000 psi minimum compressive strength for cast-in-place concrete swimming pool structures.
 - b. 4,000 psi minimum compressive strength for cast-in-place swimming pool decks with Xypex C-500 waterproofing admixture.
 - c. 1" maximum size aggregate.
 - d. 6.0 minimum sacks of cement per cubic yard.*
 - e. Maximum water to cement ratio of 0.45 maximum.
 - f. 4" maximum slump.
 - g. Xypex Admix C-500 2% 2.5% by weight of cement content. Contact Xypex Technical Services to confirm dosage. (To be used for swimming pool decks only.) * For estimate only: to be determined by mix design.
- 4. Cement: All cement shall be Portland Cement conforming to ASTM C-150, Type V, and shall be the product of one manufacturer.

5. Aggregates:

- a. Shall conform to "Standard Specifications for Concrete Aggregates," ASTM C33, except as modified herein.
- b. Coarse Aggregate: Clean sound washed gravel or crushed rock. Crushing may constitute not more than 30% of the total coarse aggregate volume. Not more than 5% flat, thin, elongated or laminated material nor more than 1% deleterious material shall be present. 1" aggregate graded from 1/4" to 1", fineness modulus 6.90 to 7.40. 1-1/2" graded from 1/2" to 1-1/2", fineness modulus 7.80 to 8.20.
- c. Fine Aggregate: Washed natural sand of hard, strong particles and shall contain not more than 1% of deleterious material, fineness modulus 2.65 to 3.05.
- d. Aggregate must be certified, non-expansive from a "known" good source.
- 6. Water: ASTM C1602: Clean, fresh, free from acid, alkali, organic matter or other impurities liable to be detrimental to the concrete (potable).

- 7. Admixtures: Admixtures shall be used upon approval of the Owner's Representative.
 - a. Air-entraining admixture: Conform to ASTM C260.
 - b. Water-reducing admixture: Conform to ASTM C494.
 - c. Waterproofing admixture for swimming pool decks only: Xypex C-500, no substitutions permitted. Conform to ASTM C494.
- 8. Xypex Admix C-500 Dosage: To be used for swimming pool decks only.
 - a. General: Xypex Admix must be added to concrete mix at time of batching. It is important to obtain a homogeneous mixture of Xypex Admix with the concrete. Do not add dry Admix powder directly to wet mixed concrete as this could cause clumping and thorough dispersion may not occur.
 - b. Dosage Rate: Under normal conditions, the crystalline waterproofing powder shall be added to the concrete mix at the following rates:
 - 1) Xypex Admix C-500 2% 2.5% by weight of cement content
 - c. Weather Conditions: For mixing, transporting and placing concrete under conditions of high temperature or low temperature, follow concrete practices such as those referred to in ACI 305R (Hot Weather Concreting) and ACI 306R (Cold Weather Concreting) or other applicable standards.
 - d. Concrete Batching & Mixing Procedures: Procedures for the addition of Xypex admixture will vary according to type of batch plant operation and equipment. Prior to the placement of any concrete, the concrete batch plant and the contractor shall be responsible to consult with the local Xypex representative concerning additional procedures for the addition, mixing and to confirm dosage.
 - e. Note: For enhanced chemical protection or for meeting specific project requirements or where the concrete mix design contains higher than 25% type F fly ash content or includes a portland cement/slag cement/type C fly ash blend, consult with manufacturer or its authorized representative to determine appropriate dosage rates.
- B. Construction Joints: Use keyform for slab pour joints. Either preformed galvanized or PVC construction joint forms of a standard manufacturer may be used. Install per manufacturer's recommendations and tool edges of slabs.
- C. Waterstops: PVC bulb-type for use between concrete pours / lifts, conforming with ASTM D 570, D 624, and D 638. Provide in configuration(s) as recommended by manufacturer for specific application. Greenstreak, W.R. Meadows, or approved equal.

D. Curing Materials:

- 1. Liquid Membrane (covered slab): Chlorinated rubber membrane forming, curing-sealing compound conforming to ASTM C309.
- 2. Liquid Membrane (exposed slab): Clear methyl and butyl methacrylate non-staining, membrane forming, curing-sealing compound conforming to ASTM C309.

E. Cement Grout and Drypack:

1. Cement Grout: Mix 1 part by volume of Portland Cement, 1/2 part by volume of water and fine aggregate enough to make mixture flow under its' own weight.

2. Drypack: Mix 1 part by volume of Portland Cement, 1/2 part by volume of water and fine aggregate enough to make a stiff mix that will mold into a ball. Mix no more than can be used in 30 minutes.

2.4 JOINT SEALANT MATERIALS

- A. Caulking: Multipart, non-sag gun grade polyurethane-based sealant meeting the requirements of ASTM C920-02, Type S or M, Mamemco International, Pecora, Sika Corp., Sonneborn Building Products, Tremco or approved equal. Self-leveling caulking materials are not allowed.
- B. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- C. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- D. Sealant Backer Rod: Provide compressible polyethylene or polyurethane backer rod as recommended by the sealant manufacturer.
- E. Bond Breaker Tape: Provide polyethylene tape or other plastic tape as recommended by sealant manufacturer, to be applied to sealant-contact surfaces where bond to substrate or joint filler must be avoided for proper performance of sealant.
- F. Sand: Cover the surface of the caulking with #30 silica sand.

2.5 OTHER MATERIALS

A. All other materials, not specifically described but required for proper completion of the work of this Section, shall be as selected by the Contractor subject to the advance review by the Owner's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection:

- 1. Prior to all Work of this Section, carefully inspect the installed Work of other trades and verify that all such Work is complete to the point where this installation may properly commence.
- 2. Verify that all Work may be constructed in accordance with all applicable codes and regulations, the referenced standards, and the original design, and in accordance with site specific Geotechnical Report.

B. Discrepancies:

- 1. In the event of discrepancy, immediately notify the Owner's Representative.
- 2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
- 3. Failure to notify the Owner's Representative and give written notice of discrepancies shall constitute acceptance by the Contractor of existing conditions as fit and proper to receive work.

3.2 CONCRETE FORMWORK

A. Construction of Forms:

1. General: Construct all required forms to be substantial, sufficiently tight to prevent leakage of concrete paste, and able to withstand excessive deflection when filled with wet concrete.

2. Layout:

- a. Form for all required cast-in-place concrete to the shapes, sizes, lines and dimensions indicated on the Drawings.
- b. Exercise particular care in the layout of forms to avoid necessity for cutting concrete after placement.
- c. Make proper provisions for all openings, offsets, recesses, anchorages, blocking and other features of the Work as shown or required.
- d. Perform all forming required for Work of other trades and do all cutting and repairing of forms required to permit such installation.
- e. Carefully examine the Drawings and Specifications and consult with other trades as required relative to providing for pipe and conduit penetrations, reglets, chases and other items in the forms.
- 3. Imbedded Items: Set all required steel frames, angles, bolts, inserts and other such items required to be anchored in the concrete prior to concrete being placed.

4. Bracings:

- a. Properly brace and tie the forms together so as to maintain position and shape and to ensure safety to workmen.
- b. Construct all bracing, supporting members and centering of ample size and strength to safely carry, without excessive deflection, all dead and live loads to which they may be subjected.
- c. Properly space the forms apart and securely tie them together, using metal spreader ties that give positive tying and accurate spreading.
- 5. Wetting: Keep forms sufficiently wetted to prevent joints from opening up before concrete is placed.

B. Plywood Forms:

- 1. Design: Nail the plywood panels directly to studs and apply in a manner to minimize the number of joints.
- 2. Joints: Make all panel joints tight butt joints with all edges true and square.

C. Footing Forms:

1. Wood Forms: All footing forms shall be wood unless otherwise specifically approved by the Owner's Representative, or as specified in paragraph 3.2(C)(2).

2. Earth Forms:

- a. Side walls for footings may be of earth provided the soil will stand without caving and the sides of the bank are made with a neat cut to the minimum dimensions indicated on the Drawings.
- b. For excavation and backfill of earth forms, conform with applicable provisions of Section 13 11 01.

D. Reuse of Forms:

- 1. Reuse of forms shall be subject to advance approval of the Owner's Representative.
- 2. Except as specifically approved in advance by the Owner's Representative, reuse of forms shall in no way delay or change the schedule for placement of concrete from the schedule obtainable if all forms were new.
- 3. Except as specifically approved in advance by the Owner's Representative, reuse of forms shall in no way impart less structural stability to the forms nor less acceptable appearance to finished concrete.

E. Removal of Forms:

1. General:

- a. In general, side forms of footings may be removed seven (7) days after placement of concrete, but time may be extended if deemed necessary by the Owner's Representative.
- b. Forms for footings, foundations, grade beams, slabs, walls, and other formed concrete may be removed fourteen (14) days after placement of concrete.

2. Removal:

- a. Use all means necessary to protect workers, passersby, the installed Work of other trades and the complete safety of the structure.
- b. Cut nails and tie wires or form ties off flush, and leave all surfaces smooth and clean
- c. Remove metal spreader ties on exposed concrete by removing or snapping off inside the wall surface and pointing up and rubbing the resulting pockets to match the surrounding areas.
- d. Flush all holes resulting from the use of spreader ties and sleeve nuts using water, and then solidly pack throughout the wall thickness with cement grout applied

under pressure by means of a grouting gun; grout shall be one-part Portland Cement to 2-1/2 parts sand; apply grout immediately after removing forms.

3.3 CONCRETE REINFORCEMENT

A. Bending:

1. General:

- a. Fabricate all reinforcement in strict accordance with the Drawings.
- b. Do not use bars with kinks or bends not shown on the Drawings.
- c. Do not bend or straighten steel in a manner that will injure the material. (When opposite end is already encased in concrete.)

2. Design:

- a. Bend all bars cold.
- b. Make bends for stirrups and ties around a pin having a diameter of not less than four (4) times the minimum thickness of the bar (#3-#5) per ACI.
- c. Make bends for other bars, including hooks, around a pin having a diameter of not less than six (6) times the minimum thickness of the bar.

B. Placing:

1. General: Before the start of concrete placement, accurately place all concrete reinforcement, positively securing and supporting by concrete blocks, metal chairs or spacers, or by metal hangers.

2. Clearance:

- a. Preserve clear space between bars of not less than one and one-half (1-1/2) times the nominal diameter of the round bars.
- b. In no case let the clear space be less than one and one-half (1-1/2) inches nor less than one and one-third (1-1/3) times the maximum size of the aggregate.
- c. Provide the following minimum concrete covering of reinforcement:
 - 1) Concrete deposited against earth: three (3) inches minimum.
 - 2) Concrete below grade deposited against forms: two (2) inches minimum.
 - 3) Concrete elsewhere: As indicated on Drawings or otherwise approved by the Owner's Representative.

3. Splicing:

- a. Horizontal Bars:
 - 1) Place bars in horizontal members with minimum lap at splices sufficient to develop the strength of the bars.
 - 2) Bars may be wired together at laps except at points of support of the member, at which points preserve clear space described above.
 - 3) Whenever possible, stagger the splices of adjacent bars.
 - 4) Splice forty (40) bar diameters minimum.
 - 5) Provide non-contact lap slices for shotcrete.
- b. Wire Fabric: Make all splices in wire fabric at least one and one-half (1-1/2) meshes wide.

- c. Other Splices: Make only those other splices that are indicated on the Drawings or specifically approved by the Owner's Representative.
- 4. Dowels: Place all required steel dowels and securely anchor them into position before concrete is placed.
- 5. Obstructions: In the event conduits, piping, inserts, sleeves and other items interfere with placing reinforcement as indicated on the Drawings or otherwise required, immediately consult with the Owner's Representative and obtain approval of a new procedure prior to placing concrete.
- C. Cleaning Reinforcement: Steel reinforcement, at the time concrete is placed around it, shall be free from rust scale, loose mill scale, oil, paint and all other coatings which will destroy or reduce the bond between steel and concrete. Bend down all tile wire away from the top of the pool deck. Maintain a 2" clear from the top of the concrete to the tie wire.

3.4 CAST-IN-PLACE CONCRETE

- A. Conveying and Placing Concrete:
 - 1. Before placing concrete, mixing and conveying equipment shall be well cleaned, and the forms and space to be occupied by concrete shall be thoroughly cleaned and wetted. Ground water shall be removed until the completion of the work.
 - 2. No concrete shall be placed in any unit of work until all formwork has been completely constructed, all reinforcement has been secured in place, all items to be built into concrete are in place, and form ties at construction joints tightened.
 - 3. Concrete shall be conveyed from mixer to place of final deposit in such a way to prevent the separation or loss of ingredients. It shall be placed as nearly as practicable in its' final position to avoid rehandling or flowing. Concrete shall not be dropped freely where reinforcing bars will cause segregation, nor shall it be dropped freely more than six (6) feet. Use tremies, spouts and dump boxes in deep sections. Vibrators are not acceptable for facilitating concrete transport.
 - 4. Concrete shall be tamped and spaded to insure proper compaction into all parts of forms and around reinforcement. A mechanical vibrator shall be used to thoroughly compact the concrete. Vibration must be by direct action in the concrete and not against forms or reinforcement.
 - 5. Mixing and transport time as indicated in ASTM C94 is required. If air temperatures are between 85° and 90° F the delivery time is to be reduced to 75 minutes. When air temperatures are in excess of 90° F the delivery time should be reduced to 60 minutes.
 - 6. Truck mixes without batch certificates will be rejected.
- B. Construction Joints / Expansion Joints: Construction joints and expansion joints shall be provided at locations and in the manner shown on the Drawings. With exception of existing

concrete / new shotcrete joints, use PVC bulb-type waterstops appropriate for design condition between all concrete pours / lifts to avoid cold joints. Waterstops shall be placed in such a way to protect reinforcing steel from rust and oxidation. All expansion joints must be the full depth of the concrete section in which they are located.

- C. Slab Finishes: Concrete slabs shall be compacted and screeded uniformly to grades shown. Push large aggregates below the surface with a screen tamper, screed and bull float. As soon as the surface becomes workable, it shall be wood floated, then finished as indicated on the Drawings to a uniform smooth, true surface in a neat and workmanlike manner. Carefully coordinate slab finish requirements with other trades (ceramic tile, pool plaster) to ensure concrete finish is appropriate substrate for final finish material.
 - 1. Contractor shall provide three mock-up deck samples, minimum 3'x 3', with a wedge anchor installed in one sample. These (3) samples shall be constructed; one with a light broom finish, one (1) with a medium broom finish and one (1) with a heavy broom finish for determination and selection of an appropriate deck finish. Each sample shall be edged on all four sides to demonstrate a 3/4" radius edge. Anchor installation shall demonstrate acceptable interface between anchor and the top of deck. Deck samples shall remain on job site through final inspection for reference.
 - 2. Pool Floor Slab: Heavy Wire Broom Finish.

D. Protection and Curing:

- 1. Concrete shall be protected from injurious action of the elements and defacement of any nature during construction.
- 2. All forms must be kept wet to prevent drying out of the concrete.
- 3. All concrete surfaces including footings must be kept wet for at least seven (7) days after concrete is placed.
- 4. Apply the appropriate curing materials, as specified in 2.3 of this Section, immediately after finishing slabs. Application shall be as specified by the manufacturer.

E. Form Removal:

- 1. Take care in removing forms so that surfaces are not marred or gouged and that corners are true, sharp and unbroken.
- 2. No steel spreaders, ties or other metal shall project from or be visible on any concrete surfaces.

F. Defective Work:

1. Should the strength of any concrete for any portion of the work indicated by tests of molded cylinders and core tests fall below minimum 28 days strength specified or indicated, concrete will be deemed defective work and shall be replaced.

- 2. Concrete work that is not formed as indicated, is not true to intended alignment, not plumb or level where so intended, not true to intended grades or elevations, not true to specified or selected finish, contains sawdust shavings, wood, or embedded debris, which exhibits cracks or contains fine or coarse sulfide particles, or expansive aggregates detrimental to performance or appearance of the concrete shall be deemed defective.
- 3. Promptly perform work required to replace and properly clean (by sandblasting if necessary) any defective concrete panels (control joint or expansion joint to control joint or expansion joint), at Contractor's expense, including all expense of additional inspection, tests, or supervision made necessary as a result of defective concrete.

3.5 EXPANSION JOINTS

- A. Temperatures: Do not install sealants when air temperature is less than 40°F.
- B. Tooling: Tool exposed joints to a slightly concave surface using slicking materials recommended by the manufacturer. The tooling procedure shall press sealant against the sides of the joint. No materials shall be left "feathered" out or smeared on the abutting materials. Completed joints shall have a uniform professional appearance.
- C. Joint Construction: Sealant joint width, thickness and cross-sectional profile to be constructed in strict accordance with the sealant manufacturer's recommendations.
- D. Sand: At the appropriate time cover the sealant with sand to provide a sanded finish.

3.6 CLEAN-UP

A. Upon completion of the Work of this Section, immediately remove all swimming pool concrete materials, debris and rubbish occasioned by this Work to the approval of the Owner's Representative.

END OF SECTION 13 11 02

SECTION 131104 - SWIMMING POOL CERAMIC TILE

PART 1 - GENERAL

1.1 WORK INCLUDED

- A. Swimming pool ceramic tile detailed on the Drawings, including, but not limited to, the following:
 - 1. Pool Gutter Tile (on top and down cantilever face)
 - 2. Depth Marker Tile (at cantilever deck face).
 - 3. Depth / Caution Marker Tile (at pool gutter).
 - 4. International 'No Diving' Tile

1.2 QUALITY ASSURANCE

A. Qualifications of Workers:

- 1. The entity performing the work of this Section shall have been successfully engaged in the respective trade for at least five (5) years immediately prior to commencement of the Work.
- 2. For actual construction operations, use only trained and experienced workers with a minimum of three (3) years experience with the materials and methods specified.
- 3. Provide at least one person who shall be present at all times during execution of the work of this Section, with a minimum of five (5) years experience with the type of materials being installed, the referenced standards, and who shall direct all Work performed under this Section.
- B. Standards: In addition to complying with all pertinent codes and regulations:
 - 1. Manufacture of all tile shall be in accordance with ANSI A-137.1.
 - 2. Install ceramic tile in accordance with the recommendations contained in the 2022 "Handbook for Ceramic Tile Installation" of the Tile Council of America, Inc.
- C. Tolerances: Install all swimming pool ceramic tile straight, true, plumb and square within a tolerance horizontally of one in 200 and a tolerance vertically of one in 500. Waterline and gutter bullnose tile shall be level to 1/8" (+/- 1/16") around entire perimeter of swimming pools.

1.3 SUBMITTALS AND SUBSTITUTIONS

- A. Provide submittals in conformance with the requirements of Section 01 33 00.
- B. Samples: Submit samples of each color and pattern in the specified groups. Character samples can be representative for review prior to screening of actual tile.
- C. Master Grade Certificate: Prior to opening ceramic tile containers, submit a Master Grade Certificate, signed by the manufacturer of the tile used and issued when the shipment is made, stating the grade, kind of tile, identification marks for the tile containers, and the name and location of the Project.
- D. Specifications: Submit manufacturer's recommended installation specifications for the Work.
- E. Submit proof of qualifications as specified in Article 1.2.A of this Section.

1.4 PRODUCT HANDLING

- A. Delivery: Deliver all materials to the Project Site in the manufacturer's original unopened containers with all labels intact and legible.
- B. Storage: Store all materials under cover in a manner to prevent damage and contamination, and store only the specified materials at the Project site.
- C. Protection: Use all means necessary to protect swimming pool ceramic tile before, during and after installation and to protect the installed Work specified in other Sections.
- D. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative.

PART 2 - PRODUCTS

2.1 TILE

- A. Pool Gutter Tile (on top and down cantilever face):
 - 1. Material: Group 3 quality, frost proof unglazed ceramic mosaic tile with absorption rate of less than 1% as manufactured by Dal-Tile or approved equal.
 - 2. Size: 1 x 1 inches and S-812 universal trim, 1 x 1 inches.
 - 3. Color: Dal-Tile #D-169 'Waterfall Blue'.
- B. Depth Marker Tile (at cantilever deck face):

- 1. Material: All depth marker tile shall be glazed ceramic tile as manufactured and/or distributed by Dal-Tile, Precision Tile Co., or approved equal.
- 2. Size: 4-1/4 x 4-1/4 inches
- 3. Color: Dal-Tile #O-169, 'Waterfall' with Black silk screen letters and numbers at depth markers.
- 4. Trim: Furnish trim pieces as indicated on the Drawings (cuts required to S-812 universal trim tile to fit with depth marker tile)
- C. Depth / Caution Marker Tile (at pool gutter):
 - 1. Material: Group 3 quality, frost proof unglazed ceramic mosaic tile with absorption rate of less than 1% as manufactured by Dal-Tile or approved equal.
 - 2. Size: 1 x 1 inches
 - 3. Color: Dal-Tile #D-311, 'Black' letters and numbers on #D-169, 'Waterfall' field.
- D. International 'No Diving' Tile:
 - 1. Inlays 'MG' series #C821500, 8" x 8" ceramic tile, black and red markings on white background, skid resistant finish for decking installation.

2.2 MORTAR

- A. Laticrete 3701 fortified mortar #LCR-37-1017
- B. Site mortar mix shall comply with ASTM C270 standards.
 - 1. Sand for Mortar: Comply with requirements of fine aggregate for concrete.
 - 2. Cement: Type I Portland Cement, conforming to ASTM C150.
 - 3. Hydrated Lime: Conforming to ASTM C206 or 207, Type S.
 - 4. Water: From a potable source.
- C. Water from potable source.
- D. Mortar shall comply with ASTM C627.

2.3 THIN SET MORTAR

A. Laticrete 254 Platinum. Laticrete, Custom or equal.

- B. Water from potable source.
- C. Mortar shall meet ASTM C627.

2.4 GROUT

A. All tile grout shall be waterproof grout complying with the recommendations of referenced standards. Grout color shall be grey for dark backgrounds, white for light backgrounds (verify colors with Architect).

2.5 OTHER MATERIALS

A. All other materials, not specifically described but required for a complete and proper installation of ceramic tile as indicated on the Drawings, shall be new, first quality of their respective kinds, and subject to the approval of the Owner's Representative.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection:

- 1. Prior to all Work of this Section, carefully inspect the installed Work of other trades and verify that all such Work is complete to the point where this installation may properly commence.
- 2. Verify that ceramic tile can be installed in accordance with the original design and all referenced standards.

B. Discrepancies:

- 1. In the event of discrepancy, immediately notify the Owner's Representative.
- 2. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
- 3. Failure to notify the Owner's Representative and give written notice of discrepancies shall constitute acceptance by the Contractor of existing conditions as fit and proper to receive its Work.

3.2 INSTALLATION

A. Method:

- 1. Install all ceramic tile in strict accordance with installation method P601-90 of the 2022 Handbook for Ceramic Tile Installation of the Tile Council of America, Inc.
- 2. Be certain to install all ceramic tile perfectly level, flush, plumb, and to the finish grades and elevations indicated on the Drawings.

B. Interface:

- 1. Carefully establish and follow the required horizontal and vertical elevations to insure proper and adequate space for the work and materials of other trades.
- 2. Coordinate and cooperate as required with other trades to insure proper and adequate interface of ceramic tile Work with the Work of other trades.

3.3 GROUTING

- A. Follow grout manufacturer's recommendations as to grouting procedures and precautions.
- B. Remove all grout haze, observing grout manufacturer's recommendations as to use of acid and chemical cleaners.

3.4 EXTRA STOCK

A. Provide one (1) unopened box of extra tile for 2.1A for Owners use at a future time.

3.5 CLEAN-UP

A. Upon completion of the swimming pool ceramic tile installation, thoroughly clean and polish the exposed surfaces of tile work. Completely clean work area of debris and rubbish occasioned by this Work and dispose of to the approval of the Owner's Representative.

END OF SECTION 131104

SECTION 131106 – SWIMMING POOL EQUIPMENT

PART 1 - GENERAL

1.1 WORK INCLUDED

A. Swimming pool equipment items required for this Work as indicated on the Drawings and specified herein.

1.2 QUALITY ASSURANCE

- A. Qualifications of Workers:
 - 1. The entity performing the work of this Section shall have been successfully engaged in the respective trade for at least five (5) years immediately prior to commencement of the Work.
 - 2. For actual construction operations, use only trained and experienced workers with a minimum of three (3) years experience with the materials and methods specified.
 - 3. Provide at least one person who shall be present at all times during execution of the work of this Section, with a minimum of five (5) years experience with the type of materials being installed, the referenced standards, and who shall direct all Work performed under this Section.
- B. All equipment supplied or work performed shall comply with regulations governing public swimming pools and spas as contained within Chapter 31 of California Building Code, latest edition.

1.3 SUBMITTALS AND SUBSTITUTIONS

- A. Provide submittals in conformance with the requirements of Section 01 33 00.
- B. Required submittals include:
 - 1. Swimming Pool Deck Equipment as specified in Article 2.1 of this Section.
- C. Submit proof of qualifications as specified in Article 1.2.A of this Section.
- D. The equipment shown on the plans represent the first listed items in the technical specifications. The Contractor shall be responsible for all required field coordination and installation of any approved equal product to provide a fully working and warranted system. The Contractor shall submit detailed shop drawings for any products used other than the first listed specified items. Contractor provided shop drawings shall include details and quality equal to the original plans and construction documents. The Contractor shall provide any and all required engineering

including but not limited to structural and anchorage requirements for any proposed equipment other than the first listed specified equipment. The Contractor is responsible to provide a factory certified representative(s) to start-up and provide on-site training for all swimming pool mechanical equipment provided.

1.4 PRODUCT HANDLING

- A. Protection: Use all means necessary to protect swimming pool equipment items before, during and after installation and to protect the installed work specified in other Sections.
- B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner's Representative.

PART 2 - PRODUCTS

2.1 DECK EQUIPMENT

- A. (N) Stanchion Sockets: 1.90" I.D. Bronze. KDI-Paragon 38201TC, no known equal. Eighteen (18) required.
- B. (N) Stanchion Posts: 1.90" O.D. x .145 wall. KDI-Paragon Six (6) #38106 and Six (6) #38301, no known equal.
- C. (N) Cross Braced Ladders: 'Paragon' #42123, with custom 5" wide stairs treads, no known equal. Six (6) total.
- D. (N) Anchor Sockets for Ladders: KDI-Paragon 28102, no known equal. Twelve (12) required.
- E. (N) Escutcheon Plates for Ladders: KDI-Paragon 28301, no known equal. Twelve (12) required.
- F. (N) Accessible Lift: 'Aqua Creek' Mighty Lift #MTY400 (350 lbs. min. and 400 lb. max. lifting capacity. Furnish complete with anchors, cover, extra battery pack and transporter cart. All parts and accessories shall be 'Coastal Gray'. One (1) required.
- G. (N) 1 Meter Dive Stand: Arcadia Air Products 'Durafirm' #70-231-400, complete with (N) anchors, stainless steel bolts, mounting hardware and provide bonding to new deck. Two (2) dive stands required.
- H. (N) 3 Meter Dive Stand: Arcadia Air Products 'Durafirm' #70-231-300, complete with (N) anchors, stainless steel bolts, mounting hardware and provide bonding to new deck. Two (2) dive stands required.
- I. (E) 16 Foot Diving Board: Duraflex International Corporation, 'Maxiflex B' #66-231-330, remove, clean, store and reinstall on (N) dive stands. Four (4) total.

- J. (N) ADA Compliant 24" Wide Aqua Step Ladder: 'Lincoln Equipment' #81-485, 8 steps with 7.5" risers, (field verify all dimensions prior to ordering), with shielded treads, extended handrails and 600 lbs. weight capacity, complete with deck anchors and bolts. Must comply with ADAAG guidelines.
- K. **ADDITIVE ALTERNATE #1:** (N) Starting Platform Anchors: KDI Paragon 'Competitor' #23140DW, 10" deep, no known equal. Twenty-seven (27) required. 'Competitor' #23074, cover for dual wedge, 'Competitor' #23303, cover removal tool, two (2) required.
- L. **ADDITIVE ALTERNATE #1:** Adjustable Starting Platforms: Track Start Competitor, B dimension = 36", rear mount custom #24621 no known equal. Eighteen (18) required. Provide adjustable full backplate and side handgrips for all platforms.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Inspection:

- 1. Prior to installing the items of this Section, carefully inspect the installed Work of other trades and verify that all such Work is complete to the point where this installation may properly commence.
- 2. Verify that the swimming pool equipment items may be installed in strict accordance with original design, pertinent codes and regulations, and the manufacturers' recommendations.

B. Discrepancies:

- 1. In the event of discrepancy, immediately notify the Owner's Representative.
- 2. Do not proceed with installation in areas of discrepancy until all such discrepancies are fully resolved.
- 3. Failure to notify the Owner's Representative and give written notice of discrepancies shall constitute acceptance by the Installer of existing conditions as fit and proper to receive its Work.

3.2 INSTALLATION

A. Supply and install items of swimming pool equipment in strict accordance with applicable codes and regulations, the original design, and the manufacturer's published recommendations, anchoring firmly and securely for long life under hard use.

- B. Coordinate with other trades to insure all imbedded items are set plumb and flush. Railing ends must have anchor sockets and escutcheon plates. Be certain that deck equipment and railings are properly bonded prior to imbedding.
- C. All equipment shall be braced and/or anchored to resist a horizontal force acting in any direction using the criteria shown on the Drawings.

3.3 CLEAN-UP

A. Upon completion of swimming pool equipment, remove all debris, materials and equipment occasioned by this Work to the approval of the Owner's Representative.

END OF SECTION 131106

SECTION 220100 - OPERATION AND MAINTENANCE OF PLUMBING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. All levels of 22 00 00
- B. Preparations.
 - 1. Prior to data collection and compilation, prepare and submit in duplicate an outline of the proposed organization and content.
 - 2. Compilation: Prepare and collect data concurrently with construction progress. Compile per submitted outline.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE MANUALS

A. Form of Submittals

- 1. Prepare data in form of an instructional manual for use by Owner's personnel.
- 2. Cover: Identify each volume with typed or printed title, "OPERATING AND MAINTENANCE INSTRUCTION". List:
 - a. Title of Project.
 - b. Provide indexed tabs.
 - c. Identify of separate structure as applicable.
 - d. Identity of general subject matter covered in the manual.
- 3. Format:
 - a. PDF

PART 3 - EXECUTION

3.1 OPERATION AND MAINTENANCE DATA

A. General: Record data and operation and maintenance data are complimentary. Submittal items which may be required under both categories may be included only under one submittal if a statement to that effect is included in the other submittal.

B. Quality Assurance

- 1. Preparation of data shall be done by personnel.
 - a. Trained and experienced in maintenance and operation of described products.
 - b. Familiar with requirements of this Section.
 - c. Skilled as technical writer to the extent required to communicate essential data.

d. Skilled as draftsman competent to prepare required drawings.

C. Content of Manual

- 1. Neatly typewritten table of contents for each volume, arranged in systematic order.
 - a. A list of each product required to be included, indexed to content of the volume.
 - b. List, with each product, name, address and telephone number of:
 - 1) Subcontractor or installer.
 - 2) Maintenance contractor, as appropriate.
 - 3) Identify area of responsibility of each.
 - 4) Local source of supply for parts and replacement
 - c. Identify each product by product name and other identifying symbols as set forth in Contract Documents.

2. Product Data:

- a. Include only those sheets which are pertinent to the specific product.
- b. Annotate each sheet to:
 - 1) Clearly identify specific product or part installed.
 - 2) Clearly identify data applicable to installation.
 - 3) Delete references to inapplicable information.

3. Drawings:

- a. Supplement product data with drawings as necessary to clearly illustrate.
 - 1) Relations of component parts of equipment and systems.
 - 2) Control and flow diagrams.
- b. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation
- c. Do not use Project Record Documents as maintenance drawings.
- 4. Supplement product data for the particular installation.
 - a. Organize in consistent format under separate headings for different procedures.
 - b. Provide logical sequence of instructions for each procedure.
- 5. Factory Authorized Start-Up Report.
 - a. Provide a factory start-up report for each piece of equipment. Contractor start-up reports, unless contractor is a factory authorized representative will not be allowed.
- 6. Copy of each warranty, bond and service contract issued.
 - a. Provide information sheet for Owner's personnel, give:
 - 1) Proper procedures in event of failure.
 - 2) Instances which might affect validity of warranties or bonds.

D. Manual for Equipment and Systems:

- 1. Submit one copy of complete manual in final form in PDF format.
- 2. Content, for each unit of equipment and system, as appropriate.
 - a. Description of unit and component parts.
 - 1) Function normal operating characteristics, and limiting conditions
 - 2) Performance curves, engineering data and tests.
 - 3) Complete nomenclature and commercial number of replaceable parts.
 - b. Operating procedures:
 - 1) Start-up, break-in, routing and normal operating instructions.
 - 2) Regulation, control, stopping, shut-down and emergency instructions.
 - 3) Summer and winter operating instructions.

- 4) Special operating instructions.
- c. Maintenance Procedures:
 - 1) Routing operations.
 - 2) Guide to "trouble-shooting"
 - 3) Disassembly, repair and reassemble.
 - 4) Alignment, adjusting and checking.
- d. Servicing and lubrication schedule.
 - 1) List lubricants required.
- e. Manufacturer's printed operating and maintenance instructions.
- f. Description of sequence of operation by control manufacturer.
- g. Original manufacture's parts list, illustrations, assembly drawings and diagrams required for maintenance.
 - 1) Predicted life of parts subject to wear.
 - 2) Items recommended to be stocked as spare parts.
- h. As-installed control diagrams by controls manufacturer.
- i. Each contractor's coordination drawings:
 - 1) As-installed color-coded piping diagrams.
- j. Charts of valve tag numbers, with location and function of each valve.
- k. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
- 1. Other data as required under pertinent sections of specifications.
- 3. Content for each electric and electronic system, as appropriate.
 - a. Description of system and component parts.
 - 1) Function, normal operating characteristics, and limiting conditions.
 - 2) Performance curves, engineering data and tests.
 - 3) Complete nomenclature and commercial number of replaceable parts.
 - b. Circuit directories of panel boards.
 - 1) Electric service.
 - 2) Controls.
 - 3) Communications
 - c. As-installed color coded wiring diagrams.
 - d. Operating procedures.
 - 1) Routing and normal operating instructions.
 - 2) Sequences required.
 - 3) Special operating instructions.
 - e. Maintenance procedures.
 - 1) Routine operations.
 - 2) Guide to "trouble shooting".
 - 3) Disassembly, repair and reassembly.
 - 4) Adjustment and checking.
 - f. Manufacturer's printed operating and maintenance instructions.
 - g. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 - h. Other data as required under pertinent sections of specifications.
 - i. Additional requirements for operating and maintenance data: Respective sections of Specifications.

E. Submittal Schedule

- 1. Submit tow copies of preliminary draft of proposed formats and outlines of contents prior to start of work.
 - a. Architect will review draft and return one copy with comments.
- 2. Submit one copy of complete data in final form fifteen days prior to final inspection or acceptance.
 - a. Copy will be returned after final inspection or acceptance, with comments.
- 3. Submit specified number of copies of approved data in final form 10 days after final inspection or acceptance.

F. Instruction of Owner's Personnel.

- 1. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in operation, adjustment and maintenance of products, equipment and systems
- 2. Operating and maintenance manual shall constitute the basis of instruction.
 - a. Review contents of manual with personnel in full detail to explain all aspects of operations and maintenance.

SECTION 220500 - COMMON WORK RESULTS FOR PLUMBING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. This section applies to all Division 22 Plumbing Sections.

1.2 SUMMARY

- A. This section includes all plumbing (equipment, fixtures, pipe and fittings, specialties) inside the building(s) and outside the building(s) to the point of connection to site plumbing systems.
- B. Provide complete plumbing systems including:
 - 1. Service connections to on-site utilities provided under the work of this Section or other Sections of the Specifications.
 - 2. All piping systems for conduction of cold water, heated water, soil, waste and other fluids as shown or specified for plumbing work.
 - 3. All valves, piping supports, piping penetration auxiliaries, piping protective coverings, piping, and other piping accessories as shown or specified for plumbing work.
 - 4. All plumbing equipment and auxiliary items as specified herein or shown on the drawings.
 - 5. All low voltage wiring for automatic fixtures as required.
- C. All chemicals utilized on site as part of coating, sealant, and other products shall not contain any chemical that is listed as part of Proposition 65 known carcinogens that are identified by NTP, IARC, and the USEPA California Proposition 65 chemical repository contractors are not allowed to bring these chemicals on any California Intel site.

1.3 RELATED SECTIONS

- A. Division 23 HVAC
- B. Division 26 Electrical Work

1.4 DRAWINGS AND SPECIFICATIONS

- A. For purposes of clearness and legibility, drawings are essentially diagrammatic and, although size and location of equipment are drawn to scale wherever possible, the Contractor shall make use of all data in all the contract documents and shall verify this information at building site.
- B. Information presented on Drawings and in the Specifications is based upon latest data available during their preparation. The Drawings and Specifications are for the assistance and guidance

- of the Contractor and exact locations, distances, levels, etc. will be governed by the structures and the site the contractor shall accept same with this understanding.
- C. The drawings indicate required size and points of termination of pipes, and suggest proper routes to conform to structure, avoid obstructions and preserve clearances. However, it is not intended that drawings indicate all necessary offsets, and it shall be the work of the Contractor to make the installation in such a manner as to conform to structure, avoid obstruction, preserve headroom and keep openings and passageways clear.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Contractor shall be responsible for delivery, storage, protection and placing of all equipment and materials.
- B. Equipment stored and installed at the job site shall be protected from dust, water or other damage. Cover all equipment stored exposed to weather.

1.6 STRUCTURAL REQUIREMENTS

A. Structural members shall not be cut or modified in any manner without specific instructions from the structural engineer.

1.7 CODES AND SAFETY ORDERS

- A. All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshall; the Safety Orders of the Division of Industrial Safety; the I.S.O. codes;
 - 1. Latest edition of California Code of Regulations, 2019 Title 24, Part 6;
 - 2. 2019 California Plumbing Code, Title 24, Part 5;
 - 3. 2019 California Mechanical Code, Title 24, Part 4;
 - 4. 2019 California Building Code, Title 24, Part 2;
 - 5. 2019 NFPA Codes;
 - 6. Other applicable laws and regulations.
- B. Nothing in the Drawings or Specifications shall be construed to permit work not conforming to these codes. Drawings and Specifications take precedence when work and materials called for exceed Code requirements.

1.8 INSTALLATION

A. Manufacturer's Instructions:

1. When specifications require that installation comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation.

- 2. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by specifications.
- 3. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
- 4. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with the Engineer for further instructions.
- 5. Do not proceed with work without clear understanding.

1.9 PERMITS AND FEES

A. Contractor shall obtain all permits and pay all required fees for permits and/or utility services. Inspections required during the course of construction shall be arranged as required. On completion of the work furnish the owners representative with certificates of inspection.

1.10 SITE CONDITIONS

A. Assume all responsibility for damage to adjoining properties; and restore property to its original condition, should damage occur as a result of the work of this section. Contractor shall thoroughly familiarize themselves with all site conditions. Should utilities not shown on the drawings be found during excavations, promptly notify the Architect for instructions as to further action. Failure to do so will make the Contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities not shown on plans.

1.11 SUBMITTALS

A. General

- 1. A submittal schedule shall be issued by the contractor within 15 days of award of the contract. This schedule shall allow for timely review and approval as required by the contract documents.
- 2. These requirements apply only to substitutions, submittals, and shop drawings.
- 3. The contractor shall review all submittals prior to submission to the Architect. Submittals not reviewed by the contractor will be returned to the contractor and will not be reviewed.
- 4. Any deviations from specified requirements shall be clearly indicated in submittals.
- 5. Any errors in or omissions from submittals and any consequences of these are the responsibility of the Contractor.
- 6. Partial or incomplete submittals may be rejected as not complying with requirements; the Contractor shall be liable for any resultant consequences.
- 7. Delayed submittals may be rejected as not complying with requirements. Whether accepted or rejected, delayed submittals will not be considered justification for extension of contract time or similar relief.
- 8. Submittals not required or permitted by the Specifications but made at the option of the Contractor, will be returned without review unless accompanied with written valid justification.

- 9. Submittal items improperly included with those of another category (such as a proposed substitution included with shop drawing submittal) are not valid and will be returned without review.
- 10. Within 35 calendar days after award of the contract, and before fabrications and installation of any material or ordering of any materials, submit for approval one copy in PDF format of complete submittal data on specified and proposed substituted equipment and materials. Submittals shall list all materials proposed identified with drawing symbols and specific data on equipment such as arrangements, performance curves, sizes, capacity, motor locations, and other pertinent data. Check all submittals for conformance to the requirements of the Construction Documents before forwarding to the architect for each item. No consideration will be given to substitutions submitted past 35-day limit. The contractor shall be responsible for all quantities and errors and omissions of submittals. Furnish samples when requested.
- 11. Equipment and materials specified as part of the specifications and drawings are listed by two manufacturer's names. The first named manufacturer is the basis of design. The second named manufacturer has been determined to be an equivalent in quality or utility. The second named has not been specifically determined to conform to the first named in size, layout, electrical power, voltage, or impacts to building structure. The contractor is bound by all requirements for substitutes, as described below, for all second named manufacturers and equivalent equipment or products.
- 12. Each reviewed submittal will be marked to indicate review and directions as stated below.
- 13. Acceptance of a submittal does not relieve the Contractor of responsibility for omissions from the submittal or errors in the submittal.

B. Review

- 1. Submittals will be reviewed for general acceptability, not necessarily including all details. The engineers review is for general conformance with the design concept of the project and the information given in the contract documents. The contractor is solely responsible for confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating the work with that of other trades and performing all work in a safe and satisfactory manner. Corrections of comments made on this submittal during this review do not relieve contractor from compliance with the requirements of the contract documents or with its responsibilities listed herein.
 - a. Proposed substitutes will be judged not only for the acceptability of the items themselves, but also how they will be used under the conditions of the particular project.
 - b. Proposed substitutions will be judged also for compliance with qualifications and conditions stipulated in paragraph 1.13.
- 2. Each reviewed submittal will be marked to indicate review and directions as stated below.
 - a. Acceptance of a substitute does not waive the specified requirements.
 - b. Once a substitution is accepted, no revision or re-submittal may be made except for pressing and valid reason and after receipts of approval to do so.

C. Review Directions

- 1. The notation "No Exceptions Taken" indicates that no further submittal on the particular matter is required and that the Contractor may proceed with normally ensuing action. The notation may be applied to submittals on substitutions, shop drawings, record data, or operation and maintenance data. The submittal has only been reviewed for general conformance with the design concept of the Contract Documents. The contractor is responsible for the dimensions to be confirmed and correlated at the job site; information that pertains solely to the fabrication process or to the means and methods of construction; coordination of the work of all trades; and performing all work in a safe and satisfactory manner. This notation does not modify the contractor's duty to comply with the contract documents.
- 2. The notation "Make Corrections Noted" indicates that no further submittal on the particular matter is required, but the Contractor shall make all changes or corrections noted (but no others) before proceeding with normally ensuing action. The notation may be applied to submittals on substitutions or shop drawings (but usually not record data or operation and maintenance data).
- 3. The notation "Amend and Resubmit" indicates that the submittal is not accepted and must be revised, resubmitted, and reviewed again. In the case of submittal on substitutions and shop drawings so noted, the Contractor shall not proceed with any normally ensuing action until the resubmittal is reviewed. The notation may be applied to submittals on substitutions, shop drawings, record data, or operation and maintenance data.
- 4. The notation "Rejected See Remarks" indicates that the submittal is not accepted and that resubmittal on the same subject matter is not allowed and will not be considered. The notation will be applied normally only to submittals on substitutions (usually not on shop drawings, record data, or operation and maintenance data).
- 5. The notation "Returned Without Review" indicates that the submittal or item has not been considered officially because it is either not proper, valid, required, or permitted by the Specifications and has no status or effect.

1.12 SHOP DRAWINGS

- A. The contractor is responsible for providing all shop drawings so that the design professional has the opportunity to determine if the contractor understands the contract documents. It is not the purpose of shop drawings to assure that the contractor is meeting the requirements of the contract documents. Review and approval of a submittal neither extends nor alters any contractual obligation.
- B. Accompany all substituted equipment with shop drawings showing revised piping layouts in order to ascertain that substituted equipment does not adversely affect layout or work of others. Shop Drawings: The following conditions apply to shop drawings:
 - 1. Shop drawings are not and do not become Contract Documents.
 - 2. Processed shop drawing submittals and any instructions or requirements noted thereon are a part of the work, but they may not be used as a means of increasing the scope of the work.

3. If deviations, discrepancies, or conflicts between shop drawing submittals and the Contract Documents are discovered either prior to or after the submittals are processed, the Contract Document requirements shall govern.

1.13 SUBSTITUTIONS

- A. Whenever any equipment, material, or process is indicated or specified by patent of proprietary name and/or name of Manufacturer, in the Specifications and/or on the Drawings, it is understood that such specification is used to facilitate the description of the material and/or process and deemed to be followed by the words "or equal" unless noted "no substitute".
- B. Substitute equipment and materials shall be equal in all respects including quality, arrangement, utility, physical size, capacity, and performance to those specified. Approval of substitute material will not relieve the contractor from complying with the requirement of the Drawings and Specifications. The contractor shall be responsible and at his own expense, for any changes caused by proposed substitutions which affect other parts of his own work or the work of other contractors.
- C. The submittal of a proposed substitution shall clearly establish the following:
 - 1. The item can be transported into and installed in the intended space and in the manner shown
 - 2. Required connections (electrical, piping, and other) can be properly made and adjoining work can be properly accomplished.
 - 3. The proposed substitute is similar to and of substance equal to that specified, is suited to the same use as that specified, and will perform the functions required by the design.
 - 4. Motors for proposed substitute equipment will have the same minimum differential between motor brake horsepower and motor nameplate horsepower as the specified equipment.
 - 5. All performance requirements shall be at least equal to the specified product or equipment including noise levels, cooling capacity, heating capacity, air flow quantity, etc.
- D. By submitting a proposed substitution, the Contractor agrees to the following:
 - 1. He will assume full responsibility for any and all modifications and necessary alterations arising from the use of the substitute item or material including all cost incurred by all other trades.
 - 2. He will assume full responsibility for any delay in the construction schedule resulting from the use of the substitution.
 - 3. He will prove harmless and indemnify the Owner and the Owner's design consultants from real or alleged damages that may result from the installation, use, or performance of a substitute material or product.
- E. The following conditions apply to substitutions:
 - 1. Submittals of substitutions are not and do not become part of the Contract Documents.

- 2. Contractor shall not order, fabricate, use, or install any substitute product or procedure unless he has received acceptance of the substitute from the Engineer.
- 3. Should the Contractor install any substitute product in violation of the above he shall remove it and install the specified product at his own expense.
- 4. The Contractor shall provide a letter stating that all the above items shall apply to all substituted products and equipment.
- 5. Any submittal for substituted equipment or product that does not clearly show that the substituted item is equal shall be marked rejected and no further submittal shall be allowed on the substituted item. Provide in submittal format documentation that the proposed item is exactly as specified in the contract documents.

1.14 GUARANTEE

A. Guarantee all work for one year from date of acceptance, against all defects in material, equipment and workmanship including repair of damage to any part of the premises resulting from leaks or other defects in material, equipment and workmanship. Guarantee shall be on form supplied by the owner's representative.

1.15 RECORD DRAWINGS

- A. The Contractor shall dedicate one complete full set of Contract Drawings for use in recording as-built conditions.
- B. The Contractor shall update the Record Drawings as often as necessary to keep them current, but, no less than weekly.
- C. Mark-up Procedure: During the construction period, maintain a complete, current set of Contract Drawings and Shop Drawings uploaded and updated within the Bluebeam program for Project Record Documents purposes. Label each document "AS-BUILT RECORD". Keep all record documents current.
- D. The Contractor shall provide a complete set of AS-BUILT RECORD Drawings in AutoCAD (drawing) file format and one complete set in PDF format.
- E. A reference by number to Change Order, CCD, RFI, Field Order or other such document is not acceptable as sufficient record information on any document. Do not conceal any Work until required information has been recorded.
 - 1. The Contractor shall mark AS-BUILT Record Drawings to indicate the actual installation where the installation varies appreciably from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or record later.
 - a. Revisions or any modification to details shown on the Contract Drawings
 - b. Depths of various plumbing related to the main floor level.
 - c. Horizontal or vertical location of underground utilities.
 - d. Location of internal utilities concealed in construction.
 - e. Points of connection for underground work.

- f. Revisions to pipe routing locations.
- g. Incorporate changes made by Change order, CCD, ASI, RFI etc.
- h. Any new details not shown on the Contract Drawings.
- 2. The Contractor shall mark completely and accurately AS-BUILT Record Drawing prints of Contract Drawings or Shop Drawings, whichever is the most capable of showing actual physical conditions. Where Shop Drawings are marked, show cross-reference on the Contract Drawings location.
- 3. The Contractor shall mark AS-BUILT Record Drawings within BLUEBEAM with red markings. Use other colors to distinguish between changes for different categories of Work at the same location.
- 4. The Contractor shall note Contractor Change Directives numbers; Bid Alternate numbers; if any, Change Order numbers, and similar identification.
- F. Contractor shall prepare Record Drawings: Immediately prior to inspection for Certification of Substantial Completion of the Work, review completed marked-up AS-BUILT Record Drawings with District, Project Inspector to ensure accuracy of information. Once accuracy of information is confirmed, prepare and submit a full electronic set, professionally drafted in AutoCAD format, of as-built Contract Drawings and Shop Drawings.
 - 1. Incorporate changes and additional information previously marked on print sets. Delete, redraw, and/or add details and notations where applicable. Identify and date each Drawing; include the printed designation "AS-BUILT RECORD DRAWING" and the date prepared in a prominent location on each Drawing.
 - 2. Distribution: Whether or not changes and additional information were recorded, organize the original marked-up set of drawings that were maintained during the construction period within BLUEBEAM into manageable sets. The sets should be labeled with all appropriate identification, including titles, dates and other information on cover sheets and submit to Owner.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Shop drawings:

- 1. Make all drawings to an appropriate scale, large enough to show all pertinent aspects of the item and the method of its connection into the work.
- 2. Make each drawing sheet in a reproducible form such a tracing, sepia, or Mylar transparency.
- B. Grouping: Combine submittals in logical groupings; for example, submit Shop Drawings grouped by Sections of the Specifications, arranged in the specified sequence.
- C. Shop Drawings: Four blue or black line prints of each for the Engineer.
- D. Content:

- 1. Shop drawings may be:
 - a. Drawings or diagrams prepared by the Contractor, a supplier, a manufacturer, or other.
 - b. Typewritten data or descriptions.
 - c. Manufacturer's printed brochures, descriptions, charts, instructions, or data sheets.
- E. Timing: Submit all shop drawings prior to installation of any items included in submittal.

2.2 CORROSION PROOFING

- A. Corrosion Proofing / U.V. Protection: Products which will be installed outdoors, exposed to the weather, exposed to moisture, or other potentially damaging conditions shall be constructed to resist the effects of such exposure.
- B. Exterior casings shall have lapped or gasketed joints effectively sealed to prevent intrusion of moisture or other injurious substances.
- C. Casings, pipes, or product items shall be constructed of materials which are fully resistant to harmful substances they may normally contact, or (if ferrous) shall be galvanized after fabrication, or shall be fully protected from such substances by paint or other coating in appropriate thickness or number of coats.
- D. All bolts, nuts, screws, and washers shall be Galvanized unless specified to be Stainless Steel.
- E. Any exposed plastic pipe must have a U.V. inhibitor or U.V. P.

2.3 MATERIAL AND EQUIPMENT

A. All material and equipment shall be new, of the type, capacity and quality specified and free from defects. All materials and equipment shall be of the same brand or manufacturer throughout for each class of material or equipment wherever possible.

2.4 ACCESS BOXES

- A. For below grade valves and piping devices
 - 1. Christy Concrete Products Company, Brooks, with galvanized steel checker plate recessed traffic lid flush with rim of box. Lids for boxes located in areas subject to vehicular traffic shall be constructed to withstand H20 live loading as defined by the American Association of State Highway Officials (16,000 pound maximum individual wheel load). Service identification shall be conspicuously welded on lid before galvanizing. For gas service, drill twelve 3/8" diameter vent holes through lid before galvanizing. Provide manufacturer's box extensions to bring box bottom three inches below bottom of valve and box top flush with finish grade.

2. Box sizes (non traffic)

Type Valve	Valve Size	Box No.	
Water	2 1/2" and smaller	B-9	
Water	3" and 4"	B-16	

2.5 ACCESS DOORS

- A. Unless specified otherwise by the Architect, provide access doors of the following type:
 - 1. Concealed hinges, prime coated with rust-inhibitive paint, style of door to suit wall, ceiling, floor or roof construction and fire rating.
 - a. Milcor Type M
 - b. Milcor Type UFR, fire resistive type Underwriters Laboratory Class B, 1-1/2 hour rating meets UBC, IBCO and BOCA codes for two hour rated walls self latching with key lock, Elmdor/Stonman Type FR or equal.
 - 2. Minimum size; 14" by 14".
 - 3. Wall and ceiling access doors: Furnish as required for access to valves etc.; coordinate size and location to obtain access.
 - 4. See architectural drawings for further requirements.

2.6 IDENTIFICATION

A. Equipment: Black Phenolic Plates engraved with 1/2" high white letters. The equipment shall be identified by the equipment schedule tag numbers shown on the plans (i.e. IWH-1). Coordinate identification numbers with electrical contractor to ensure that the disconnect switches and other electrical/mechanical equipment has consistent identification numbers.

2.7 MISCELLANEOUS EQUIPMENT AND MATERIALS

A. Furnish and install miscellaneous equipment and materials required for the systems described whether or not specifically shown or specified.

PART 3 - EXECUTION

3.1 ACCESSIBILITY

A. Do not install any equipment, valve, control, motor, filter, or any other device requiring maintenance or service in an inaccessible location or position. Install access doors as specified herein to render all such equipment serviceable whether specifically shown on the plans or not. Maintain code clearance to all equipment. Coordinate location of doors with lights, etc., and locate symmetrically with same.

3.2 PREPARATION

- A. Observations: Check all project drawings and specifications; report any discrepancies before proceeding with the work and in time to avoid unnecessary rework.
- B. Investigation: Examine the areas, conditions, and status of other work contiguous or connecting to the work to be performed; ensure that the time of installation is coordinated with other work.
- C. Interruptions of Service: Portions of this work may involve connection to existing work, facilities, or utilities ties and may require interrupting shutdowns of same. Carefully plan, coordinate and execute such work so that any interruptions will be kept to a minimum in time and occurrence. Submit request for shutdowns and make shutdowns only after receiving written approval from the Owner.
- D. Other: Correct any unsatisfactory conditions that may impede proper execution of the work. Ensure that all arrangements, personnel, materials, and tools are appropriate and adequate before proceeding.

3.3 INSTALLATION

A. General:

- 1. Material and equipment incorporated in the work shall be used or applied only for the purpose intended or specified.
- 2. Install piping and all equipment that requires access with minimum vertical and horizontal clearances required by OSHA for service.
- 3. All pipes and all other equipment shall have 2 inches minimum clearance.
- 4. Do not proceed with work without clear understanding.

B. Manufacturer's Instructions:

- 1. When specifications require that installation comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation.
- 2. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by specifications.
- 3. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.
- 4. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with the Engineer for further instructions.
- 5. Do not proceed with work without clear understanding.

3.4 LOCATION OF EQUIPMENT AND PIPING

- A. Where job conditions do not permit the installation of piping, etc. in the location shown, it shall be brought to the engineer's attention immediately before fabrication of piping, etc. and the relocation required shall be determined in a joint conference.
- B. The contractor will be held responsible for the relocating of any items installed without first obtaining the architect's or engineer's approval. Remove and relocate such items at the contractors expense as so directed by the architect or engineer.
- C. Where piping is left exposed within a room, run in vertical or horizontal planes. Maintain uniform spacing between parallel lines and/or adjacent wall, floor or ceiling surfaces.
- D. Horizontal runs of plumbing suspended from ceilings shall provide for maximum clearance.
- E. Make minor changes in locations of equipment and piping, etc. from locations shown including minor offsets when directed by the engineer, at no additional cost to the owner.

3.5 CARE AND CLEANING

A. Clean and adjust all equipment at completion of installation to provide operating conditions satisfactory to the engineer. Remove broken, damaged or defective parts; repair or replace as directed by engineer. Remove surface material and debris resulting from this work when directed.

3.6 FLASHINGS

A. Furnish and install a waterproof flashing for each pipe or other penetration through roof or wall. Where details are not specifically delineated, submit details for review.

3.7 PAINTING

A. Painting is included under the Painting and Finishing Section. It shall be the responsibility of the Contractor to properly protect all equipment and controls during painting operations and the Contractor shall repair and/or replace any item damaged due to painting that was not properly protected.

3.8 ACCESS DOORS

A. Provide access doors to all concealed equipment, valves, controls, etc. Access doors provided by the Contractor.

3.9 OPERATION AND MAINTENANCE DATA

A. General: Record data and operation and maintenance data are complementary. Submittal items which may be required under both categories may be included only under one submittal if a statement to that effect is included in the other submittal.

B. Quality Assurance

- 1. Preparation of data shall be done by personnel
 - a. Trained and experienced in maintenance and operation of described products.
 - b. Familiar with requirements of this Section.
 - c. Skilled as technical writer to the extent required to communicate essential data.
 - d. Skilled as draftsman competent to prepare required drawings.

C. Form of Submittals

- 1. Prepare data in form of an instructional manual for use by Owner's personnel.
 - a. Cover: Identify each volume with typed or printed title, "OPERATING AND MAINTENANCE INSTRUCTION". List:
 - b. Title of Project
 - c. Provide indexed tabs.
 - d. Identity of separate structure as applicable.
 - e. Identity of general subject matter covered in the manual.
- 2. Format
 - a. Electronic PDF
- 3. Drawings
 - a. Provide supporting drawings as needed.

D. Content of Manual

- 1. Table of contents for each volume, arranged in systematic order.
 - a. Contractor, name of responsible principal, address and telephone number.
 - b. A list of each product required to be included, indexed to content of the volume.
 - c. List, with each product, name, address and telephone number of:
 - 1) Subcontractor or installer.
 - 2) Maintenance contractor, as appropriate.
 - 3) Identify area of responsibility of each.
 - 4) Local source of supply for parts and replacement.
 - 5) Identify each product by product name and other identifying symbols as set forth in Contract Documents.

2. Product Data

- a. Include only those sheets which are pertinent to the specific product.
- b. Annotate each sheet to:
 - 1) Clearly identify specific product or part installed.
 - 2) Clearly identify data applicable to installation.
 - 3) Delete references to inapplicable information.
- 3. Drawings
 - a. Supplement product data with drawings as necessary to clearly illustrate.
 - 1) Relations of component parts of equipment and systems.

- 2) Control and flow diagrams.
- b. Coordinate drawings with information in Project Record Documents to assure correct illustration of completed installation.
 - Do not use Project Record Documents as maintenance drawings.
- 4. Factory Authorized Start-Up Report.
 - a. Provide a factory start-up report for each piece of equipment. Contractor start-up reports, unless contractor is a factory authorized representative will not be allowed.
- 5. Copy of each warranty, bond and service contract issued.
 - a. Provide information sheet for Owner's personnel, give:
 - 1) Proper procedures in event of failure.
 - 2) Instances which might affect validity of warranties or bonds.

E. Manual for Equipment and Systems

- 1. Submit electronic PDF in final form.
 - a. Content, for each unit of equipment and system, as appropriate.
 - 1) Description of unit and component parts.
 - 2) Function, normal operating characteristics, and limiting conditions.
 - 3) Performance curves, engineering data and tests.
 - 4) Complete nomenclature and commercial number of replaceable parts.
 - 5) Operating procedures
 - 6) Start-up, break-in, routing and normal operating instructions.
 - 7) Regulation, control, stopping, shut-down and emergency instructions.
 - 8) Summer and winter operating instructions.
 - 9) Special operating instructions.
 - 10) Maintenance Procedures
 - 11) Routing operations
 - 12) Guide to "trouble-shooting".
 - 13) Disassembly, repair and reassembly.
 - 14) Alignment, adjusting and checking
 - 15) Servicing and lubrication schedule.
 - 16) List of lubricants required.
 - 17) Manufacturer's printed operating and maintenance instructions.
 - 18) Description of sequence of operation by control manufacturer.
 - 19) Original manufacturer's parts list, illustrations, assembly drawings and diagrams required for maintenance.
 - 20) Predicted life of parts subject to wear.
 - 21) Items recommended to be stocked as spare parts.
 - 22) As-installed control diagrams by controls manufacturer.
 - 23) Each contractor's coordination drawings.
 - 24) As-installed color coded piping diagrams.
 - 25) Charts of valve tag numbers, with location and function of each valve.
 - 26) List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
 - 27) Other data as required under pertinent sections of specifications.
 - 28) Content, for each electric and electronic system, as appropriate.
 - 29) Description of system and component parts.
 - 30) Function, normal operating characteristics, and limiting conditions.
 - 31) Performance curves, engineering data and tests.

- 32) Complete nomenclature and commercial number of replaceable parts.
- 33) Circuit directories of panel boards.
- 34) Electrical service.
- 35) Controls.
- 36) Communications
- 37) As-installed color coded wiring diagrams.
- 38) Operating procedures:
- 39) Routing and normal operating instructions.
- 40) Sequences required
- 41) Special operating instructions
- 42) Maintenance procedures
- 43) Routine operations
- 44) Guide to "trouble-shooting".
- 45) Disassembly, repair and reassembly.
- 46) Adjustment and checking.
- 47) Manufacturer's printed operating and maintenance instructions.
- 48) List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
- 49) Other data as required under pertinent sections of specifications.
- 50) Additional requirements for operating and maintenance data: Respective sections of Specifications.

F. Instruction of Owner's Personnel

- 1. Prior to final inspection or acceptance, fully instruct Owner's designated operating and maintenance personnel in operation, adjustment and maintenance of products, equipment and systems.
- 2. Operating and maintenance manual shall constitute the basis of instruction.
 - a. Review contents of manual with personnel in full detail to explain all aspects of operations and maintenance.

3.10 RECORD DATA

A. Compilation

- 1. Record and collect information concurrently with construction progress and date all entries; make drawing entries within 24 hours after occurrence of change or installation requiring recording. Any concealed work covered before recording data shall be uncovered as directed or as necessary to obtain data.
 - a. Record information on drawing prints using an erasable colored pencil (not ink or indelible pencil); describe clearly by note or graphic line as appropriate.
- 2. Locate any concealed work adequately to allow future access with reasonable ease and accuracy.
 - a. Identify the plan location of all stub outs, pipe lines, etc., which are buried or concealed in the structure, whether installed where shown on the contract drawings or in a different location; show actual field dimensions from column lines, wall lines, or other permanent reference lines or points.

- b. In many cases on the contract drawings, the arrangement of conduits, pipes and similar items is shown schematically rather than as a precise scaled layout. Identify the actual location of these with horizontal and vertical dimensions. If such lines are exposed or readily accessible, omit dimensional identification.
- c. When any work is installed of size, dimension, slope, or location different from that shown on the contract drawings, note the deviation on the Project Record set. If the variations are substantial or cannot be shown clearly on the record drawings, make a new drawing and attach to the Record set.

3. On other documents

- a. Where changes occur in specifications, clearly indicate same in ink, colored pencil, or rubber stamp.
- b. Where installed equipment differs from that specified (e.g., by accepted substitution or change order) note in the specifications and include complete data on same.

3.11 OPERATION AND MAINTENANCE DATA

- A. Preparations: Prior to data collection and compilation, prepare and submit in duplicate an outline of the proposed organization and content.
- B. Compilation: Prepare and collect data concurrently with construction progress. Compile per submitted outline.
- C. See Section 22 01 00 Operation and Maintenance of Plumbing.

SECTION 220523 - GENERAL DUTY VALVES FOR PLUMBING PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Division 22 Mechanical Sections.

1.2 SUMMARY

A. See Section 22 05 00

1.3 RELATED SECTIONS

- A. Division 26 Electrical Work
- B. Division 23 HVAC

PART 2 - PRODUCTS

2.1 GENERAL

- A. Furnish two tee handle operators for each size to suit all valves which are installed below grade in access boxes and which are not fitted with integral handles; hub end valves shall be used where required.
 - 1. Valves on systems operating over 100 psi shall be rated for 150 psi or higher as required.
- B. Shut-off service, domestic water
 - 1. Ball Valves:
 - a. Sizes 2" and smaller: NIBCO T/S/PC-585-66-LF or T/S/PC-585HP-66-LF, 600-1000 psi rated, threaded or sweat ends, full port, teflon seat, quarter turn handle with stops, two-piece, lead free, bronze body and stainless steel ball.
 - b. Sizes 2-1/2 to 4": NIBCO T-FP-600A-LF, 400 psi rated, threaded ends, full port, teflon seat, quarter turn handle with stops, two-piece dezincification resistant brass body and stainless steel ball.

- C. Check Valves: Back flow prevention service
 - 1. Swing check, PTFE disc, NIBCO or equal.
 - a. Sizes 2" and smaller: Fig. TS/PC-413-Y-LF, lead free; bronze body, threaded or soldered ends, plug type bonnet.
 - b. Size 2-1/2 and larger: Webstone 1054W Series, lead free Brass body, threaded ends.
 - 2. Non-slam check Type NS, Bell & Gossett, NIBCO, or equal.
 - a. Sizes 2" and smaller: NIBCO T/S/PC-480-Y-LF
 - b. Size 2-1/2" to 4" and larger: NIBCO W/F-910-B-LF (200 psi rated) or W/F-960-B-LF (400 psi rated); wafer or flanged ends.
 - c. Cast-iron body, bronze plug, seat and guide bushing, stainless steel helical spring.
 - d. Flow area through valve shall exceed cross-sectional area of specified pipe size by no less than 10%.

D. Pressure Reducing Valve

- 1. Sizes $\frac{1}{2}$ " 3", Watts Model 223 or equal.
 - a. Bronze body, sealed cage, removable disc holder to allow disc replacement. Rated for temperatures up to 1600 F. Adjustable pressure range from 25 to 75 psig with 300-psig initial pressure.
 - b. Provide with a separate strainer and built in bypass feature.

E. Y-Type, Armstrong

- 1. Sizes 2" and smaller: 250 psi bronze body, threaded or soldered ends, threaded screen retainer, monel screen with .045" perforations.
- 2. Sizes 2 ½" and larger: 125 psi body, 125 lb. flanged or grooved ends, bolted screen retainer. monel screen with .045" perforations.

PART 3 - EXECUTION

3.1 GENERAL

- A. Valves shall be full size of line in which installed. Furnish discs suitable for service intended. All valves shall be properly packed and lubricated. Unions shall be placed adjacent to each threaded or soldered valve or equipment connection 2" and smaller. Install flanges at all valves with stems vertical wherever possible. Stems shall not be placed below horizontal.
- B. Install unions adjacent to each valve and at final connection to each piece of equipment.
- C. All shutoff valves in water lines shall be or ball valves, unless otherwise shown.
- D. Valves shall be provided with brass identification tags indicating service controlled. Tags may be omitted on lines exposed in equipment rooms where service is obvious.

SECTION 220529 – HANGERS AND SUPPORTS FOR PLUMBING PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Division 23 Mechanical Sections.

1.2 SUMMARY

- A. Furnish and install all plumbing work shown on the drawings, specified herein, and as required for a complete and functional installation.
- B. This section includes materials and methods applicable to the work described in all Division 22 Plumbing Sections. Specific work requirements of individual Sections take precedence if in conflict with requirements of this Section.

1.3 SUBMITTALS

- A. Submit proposed alternative methods of attachment for review and approval by the Engineer, prior to deviating from the requirements given below.
- B. For all seismic bracing systems, submit structural calculations and details prepared and signed by the Contractors licensed engineer which include all resultant forces applied to the building structure. Do not overstress building structure. The maximum allowable loads are as indicated in 3.01 of this specification. The submittal data required does not require an analysis of the building structural numbers and their reaction to the loads of the piping. The submittal data needs to address attachment methods and shall include calculations indicating the forces that are applied to the building structure at the point of attachment. Calculations will be reviewed for compliance with design criteria, not for arithmetic.

1.4 RELATED SECTIONS

- A. Division 26 Electrical Work
- B. Division 23 HVAC

1.5 DRAWINGS AND SPECIFICATIONS

A. Information presented on Drawings and in the Specifications is based upon latest data available during their preparation. The Drawings and Specifications are for the assistance and guidance of the Contractor and exact locations, distances, levels, etc. will be governed by the structures and the site the contractor shall accept same with this understanding.

PART 2 - PRODUCTS

2.1 HANGERS AND SUPPORTS

- A. B-Line, Superstrut, Tolco, Grinnell, or equal.
- B. Finish: Electro-Chromate or hot dipped galvanized.
- C. Trapeze Suspension, for three or more pipes B-Line 1-5/8" width channel or a size suitable for load in accordance with manufacturer's published load ratings. No deflection to exceed 1/180 of a span.
- D. Trapeze Supporting Rods: Diameter sufficient to support the load with a safety factor of 5. Anchor rods securely to building structure. See part three for minimum sizes.
- E. Pipe Straps: copper coated for copper.
- F. Size: For insulated pipe pipe hangers sized to allow pipe insulation to pass continuously through the hanger.
- G. Insulated Pipe Shields: Utilize isolated pipe supports at all insulated pipe hanger locations.
- H. Isolators: Trisolator isolators at all hangers and clamps supporting un-insulated piping and tubing and at all points that pipe comes in contact with structure or other pipes.

PART 3 - EXECUTION

3.1 HANGERS AND SUPPORTS

- A. General: Support all piping so that it is firmly held in place by approved iron hangers and supports and special hangers as required or as scheduled on the drawings.
 - 1. Rigidly fasten hose faucets, and similar items at ends of pipe branches to the building construction near point of connection.
- B. Hanger Installation: On all insulated pipes, install the hangers on the outside of the pipe covering and not in contact with the pipe. Burning, welding, cutting, or drilling on any structural member may only be done if approved by the structural engineer. No valve or piece of equipment shall be used to support the weight of any pipe. Provide a hanger close to the point of change of direction of pipe run in either horizontal or vertical plane. Place supports and hangers for cast iron soil pipe as close as possible to joints; when hangers or supports do not come within one foot of a branch line fitting, install an additional hanger or support at the fitting. Protect insulation, when pipe is insulated, at each hanger with 180 degree, 18 gauge, 12 inch long G.I. Saddles.
- C. Hanger rods with C-clamp type structural attachment shall be equipped with retaining straps.

D. Metallic Pipe Hanger Spacing and Rod Size Schedule:

Type of Pipe	Spacing		
Pipe Size	1/2" – 2"	2 ½" – 5"	6" – 8"
Steel Pipe	*8' - 0"	10' - 0"	12' - 0"
Copper			
Tubing	5' - 0"	8'-0"	10' - 0"
Cast Iron	Support at 8'- 0" intervals and on each side of and within 12" of joint.		
Rod Size:	3/8"	1/2"	5/8"

^{*1/2&}quot; gas piping shall be spaced 6' - 0" maximum

- E. Anchor pipe subject to expansion or contraction in a manner permitting strains to be evenly distributed.
- F. Provide beam clamp retaining straps for all pipe supports attached to structural beams.

SECTION 220553 – IDENTIFICATION FOR PLUMBING PIPING AND EQUIPMENT

PART 1 - GENERAL

1.1 SEE SECTION 230500

PART 2 - PRODUCTS

2.1 IDENTIFICATION

A. Equipment: Black Phenolic Plates engraved with 1/2" high white letters. The equipment shall be identified by the mechanical equipment schedule tag numbers shown on the plans (ie. GWH-1, CP-1).

2.2 PIPE IDENTIFICATION

- A. Maximum spacing for identification shall be 10 feet.
- B. Identification shall be provided per the following
 - 1. At both sides of floor or wall penetrations
 - 2. Adjacent to all valves and flanges
 - 3. Adjacent to all changes in direction
 - 4. To be visible from the point of normal approach
- C. Indicate flow direction and type of fluid.
- D. Provide plastic labels for mechanical engraving with predrilled holes for attachment hardware.
 - 1. Material: rigid plastic laminated impact acrylic, 2-layer, exterior grade, UV stable.
 - 2. Thickness: 3/16 inch minimum.
 - 3. Maximum label size: Length and width vary for required label content but, no less than 2 inches wide by 1 inch high.
 - 4. Background color:
 - 5. Normal power: Black, matte finish.
 - 6. Lettering: White, machine engraved, Futura font, 3/8 inch high, all caps.
 - 7. Maximum temperature: Able to withstand up to 160 degrees Fahrenheit.
 - 8. Fasteners: Self-tapping stainless-steel screws, except contact type permanent adhesive where screws cannot or should not penetrate substrate.
 - a. Mounting screw type to be number 8-18 by $\frac{1}{2}$ drilling or tapping style, $\frac{1}{4}$ inch hex washer head, stainless steel, or similar, appropriate for material in which sign is affixed to. A bead of silicone sealer shall be applied on back of sign and at screw locations prior to affixing sign to equipment.
 - b. For signs larger than 3 inches by 3 inches, use a minimum of 4 mounting screws.

2.3 PAINTED IDENTIFICATION MATERIALS

- A. Stencils: Standard fiberboard stencils, prepared for required applications with the letter sizes generally complying with recommendations of ANSI A13.1 for piping and similar applications but, not less than ¾ inch high letters for access door signs and similar operational instructions.
- B. Stencil paint: Standard exterior type stenciling enamel; black, except as otherwise indicated; either brushing grade or pressurized spray can form and grade.
- C. Identification paint: Standard identification enamel of colors indicated or, if not otherwise indicated for piping systems, comply with ANSI A13.1 for colors.

2.4 PIPE IDENTIFICATION

- A. General requirements for Manufactured Pipe labels: Preprinted, color-coded, with lettering indicating service, and showing flow direction.
- B. Self-adhesive Pipe Labels: Printed plastic with contact-type, permanent-adhesive backing. Brady/Seton, Stranco, Rowmark or equal.
- C. Small pipes: For external diameters less than 6 inches, provide full-band pipe markers, extending 360 degrees around the pipe at each location, fastened by one of the following methods:
 - 1. Snap-on application of pre-tensioned semi-rigid plastic pipe marker.
 - 2. Adhesive lap joint in pipe marker overlap.
 - 3. Laminated or bonded application of pipe marker to pipe (or insulation).
 - 4. Taped to pipe (or insulation) with color-coded plastic adhesive tape, not less than 3/4 inch wide; full circle at both ends of pipe marker, tape lapped 1-1/2 inches.
 - 5. Pipe label contents: Include identification of piping service using piping system nomenclature as specified, schedules or shown, and abbreviate only as necessary for each application. Include pipe size and an arrow indicating direction of flow.
 - 6. Flow-Direction Arrows: Integral with piping system service lettering to accommodate both directions or as separate unit on each pipe label to indicate flow direction.
 - 7. Lettering Size: At least 1-1/2 inches high.

D. Locate pipe markers as follows:

- 1. Within one foot of each valve, fitting, thermometer or gauge.
- 2. At each branch or riser take off.
- 3. At each passage through walls or ceiling construction.
- 4. At each passage to underground.
- 5. On all horizontal pipe runs every 20 feet, at least twice in each room.
- 6. Identify piping contents, flow direction, supply and return.
- 7. At wall and ceiling access panels.
- 8. Practible variations or changes in locations and spacing may be made with specific approval of the University's Representive to meet specific conditions.

E. Color code shall be as follows:

- 1. Domestic Cold Water Green Background with White Lettering
- 2. Domestic Hot Water Green Background with White Lettering
- 3. Domestic Hot Water Return Yellow Background with Black Lettering
- 4. Lab Air yellow background with white text
- 5. Lab Vacuum White background with black text (could have checkerboard pattern)
- 6. Medical Air Yellow background with black text
- 7. Oxygen Green background with white text or white background with green text

F. Pipe Letter height shall be as follows:

Outside Pipe Diameter Including Insulation	Minimum Length of Label	Minimum Height of Letters
.75" – 1.25"	8"	.5"
1.5" – 2"	8"	.75"
2.5" - 6"	12"	1.25"
8" – 10"	24"	2.5"
Over 10"	32"	3.5"

PART 3 - EXECUTION

3.1 EQUIPMENT IDENTIFICATION

- A. Identify all equipment with permanently attached plates.
- B. Identify all controls and controllers except thermostats in finished areas.

3.2 IDENTIFICATION APPLICATIONS

A. Piping and Valves

1. Provide identifications for all valves. Provide tags with lettered inscriptions (not numbered).

SECTION 220700 – PLUMBING INSULATION GENERAL REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Division 22 sections.

1.2 SECTION INCLUDES

A. This Section describes insulation materials, methods, and applications for Plumbing Work, Special or specific details, applications, features, or methods may be described in work descriptions Sections or on the drawings.

1.3 RELATED DIVISIONS

A. 22 00 00: Plumbing

1.4 REFERENCES

- A. Thermal insulation materials shall meet the property requirements of one or more of the following specifications as applicable to the specific product or end use:
 - 1. American Society for Testing of Materials Specifications:
 - a. ASTM C 547, "Standard Specification for Mineral Fiber Pipe Insulation"
 - b. ASTM C 585, "Standard Practice for Inner and Outer Diameters of Rigid Thermal Insulation for Nominal Sizes of Pipe and Tubing (NPS System)"
 - c. ASTM C 1136, "Standard Specification for Flexible, Low Permeance Vapor Retarders for Thermal Insulation"

1.5 SYSTEM PERFORMANCE

- A. Insulation materials furnished should meet the minimum thickness requirements of National Voluntary Consensus Standard 90.1 (Latest edition), "Energy Efficient Design of New Buildings," of the American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE).
- B. Insulation materials furnished and installed hereunder shall meet the fire hazard requirements of applicable building codes when tested in composite form per one of the following nominally equivalent test methods:
 - 1. American Society for Testing of Materials

ASTM E 84

2. Underwriters' Laboratories, Inc.

UL 723, CAN/ULC-S102-M88

3. National Fire Protection Association

NFPA 255

- C. Molded pipe insulation shall be manufactured to meet ASTM C 585 for sizes required in the particular system.
- D. Molded fibrous glass pipe insulation shall comply with the requirements of ASTM C 547.

1.6 QUALITY ASSURANCE

- A. Qualifications of Installers: only a licensed firm employing installers specifically skilled and experienced in applying insulation to piping shall do Insulation work.
- B. Insulation materials and accessories furnished and installed hereunder shall, where required, be accompanied by manufacturers' current submittal or data sheets showing compliance with applicable specifications listed in above.
- C. Insulation materials, including all weather and vapor barrier materials, closures, hangers, supports, fitting covers, and other accessories, shall be furnished and installed in strict accordance with project drawings, plans, and specifications.
- D. Insulation materials and accessories shall be installed in a workmanlike manner by skilled and experienced workers who are regularly engaged in commercial insulation work.

E. Codes and Standards:

- 1. California Code of Regulations Title 24.
- 2. National Fire Protection Association 90A
- 3. Insulation applied to the exterior or interior surface of ducts, and the exterior surface of piping, shall be UL labeled with maximum flame-spread rating of 25 and maximum smokedeveloped rating of 50 according to ASTME 84, when tested as a composite installation including insulation, facing materials, and adhesives as normally applied.

1.7 DELIVERY AND STORAGE OF MATERIALS

- A. All of the insulation materials and accessories covered by this specification shall be delivered to the job site and stored in a safe, dry place with appropriate labels and/or other product identification.
- B. The contractor shall use whatever means are necessary to protect the insulation materials and accessories before, during, and after installation. No insulation material shall be installed that has become damaged in any way.
- C. If any insulation material has become wet because of transit or job site exposure to moisture or water, the contractor shall not install such material, and shall remove it from the job site. An exception may be allowed in cases where the contractor is able to demonstrate that wet insulation when fully dried out (either before installation or afterward following exposure to system operating temperatures) will provide installed performance that is equivalent in all

respects to new, completely dry insulation. In such cases, consult the insulation manufacturer for technical assistance.

PART 2 - PRODUCTS

- 2.1 PLUMBING EQUIPMENT INSULATION SEE 22 07 16
- 2.2 PLUMBING PIPING INSULATION SEE 22 07 19

PART 3 - EXECUTION

3.1 APPLICATION/INSTALLATION

- A. Use the types and thickness of insulation specified in work description Sections.
- B. Apply insulations in accordance with the manufacturer's recommendations and with instructions specified herein or noted on the drawings.
- C. Install insulations only after the systems, items, and equipment have been installed and tested, inspected, and accepted. Exceptions: Slip-on piping insulation and equipment insulations installed at the factory.
- D. Fit insulation snugly to the item being insulated; butt all joints tightly with no voids, spaces, or thin spots.
- E. Seal all joints completely; where sealing tape is used, center the tape over the joint.
- F. Except where specified or necessary, do not use staples or fasteners which penetrate vapor barrier jackets or covers on cold systems or equipment; where such penetrating fasteners are used, seal each penetration completely to maintain the vapor barrier integrity. All penetrations of the ASJ and exposed ends of insulation shall be sealed with vapor barrier mastic. Vapor seals at butt joints shall be applied at every fourth pipe section joint and at each fitting to provide isolation of water incursion.
- G. Use adhesives, mastics, cements, sealants, and finishes undiluted unless specifically directed otherwise; apply per manufacturer's directions.
- H. Install outdoor jacketing or other specified weather proofing or finishing on all insulations outdoors.
- I. Install all indoor exposed insulation with extra care and finish neatly.
- J. Follow specified methods of installation unless alternative methods are submitted and approved.

3.2 FINISHING

A. Finishes and Protection:

- 1. Insure that the exterior finish of all insulation is applied and complete as specified.
- 2. Make ready for painting, or painted to match existing including color where specified for paint.
- 3. Install all metal jackets or protective sheathing where specified.
- B. Repair, Touchup: Properly repair and touchup all dents, rips, tears, or other damage inflicted on jackets or exterior surfaces of insulation. Breaks or punctures in the vapor barrier of external insulation will not be accepted and must be repaired prior to project acceptance.

SECTION 220719 – PLUMBING PIPPING INSULATION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- A. A continuous intact vapor barrier is critical for all pipes conveying fluids at temperatures less than 75° F.
- B. All insulation material shall have a mold, humidity, and erosion resistant face that has met the requirements of 2019 CMC Standard No. 6-1.
- C. Insulation applied to the exterior surface of pipes located in buildings shall have a flame spread of no more than 25 and smoke developed rating of not more than 50.
- D. All requirements of Section 22 07 00 apply to this section.

PART 2 - PRODUCTS

2.1 IP-1 RIGID MOLDED SECTIONAL/INDOOR CONCEALED JACKET

- A. Regular shape (straight run).
 - 1. Molded sectional, factory fabricated of heavy density resin bonded fibrous glass, with integral factory applied all service jack of Kraft paper/aluminum foil/glass fiber reinforcement.
 - 2. Insulation shall have a thermal conductivity k factor of 0.23 at 75° F mean temperature and be suitable for direct application and service on piping having operating surface temperatures of -60° to 450°F.
 - 3. Jacket shall:
 - a. Extend 1-1/2" (minimum) along one edge of longitudinal joint to form a sealing lap, which shall be faced inside with a paper protected pressure sensitive adhesive.
 - b. Have a permanence rating of 0.02 perm/in. and a Beach puncture resistance of 50 units:
 - c. Have an exterior suitable for painting with latex or water base paint.
 - 4. All insulation shall have composite (insulation, jacket, tape seal and adhesive used to adhere jacket to the insulation). Fire and Smoke Hazard ratings as tested under procedure ASTM E-84, NFPA 255 and UL 723, not exceeding Flame Spread of 25 and a Smoke Developed of 50. PVC fitting covers and accessories, such as adhesives, mastics, cements and cloth for fittings shall have the same component ratings.
 - 5. Paper laminate jackets shall be permanently flame and smoke resistant. Chemicals used for treating paper in jacket laminates shall not be water soluble and shall be unaffected by water and humidity.
 - 6. Fiberglass Schuler-Manville Micro-Lok, or equal.

- B. Irregular shape (fittings, flanges, valves, etc.)
 - 1. Fibrous glass of same density, thickness, and other properties or characteristics as the adjacent regular shape insulation either pre-molded or field forged to fit the item being insulated. The pre-molded insulation shall be provided with weather protection cover.

2.2 IP-2 RIGID MOLDED SECTIONAL/OUTDOOR JACKET

- A. Regular shape (straight run).
 - 1. Molded sectional, factory fabricated of heavy density resin bonded fibrous glass, with integral factory applied all service jacket of Kraft paper/aluminum foil/glass fiber reinforcement.
 - 2. Insulation shall have a thermal conductivity k factor of 0.23 at 75° F mean temperature and be suitable for direct application and service on piping having operating surface temperatures of -60° to 450°F.
 - 3. Jacket:
 - 4. Straight runs: .016" thick smooth sheet aluminum finish.
 - 5. Irregular shapes:
 - a. Amerisafe, factory molded aluminum covers, or
 - b. Mitered aluminum sheet matching straight run jacketing, or
 - c. Weather coating.
 - d. Alternative jacketing: Schuler-Manville Type ML, metal jacketing system.
 - 6. All insulation shall have composite (insulation, jacket, tape seal and adhesive used to adhere jacket to the insulation). Fire and Smoke Hazard ratings as tested under procedure ASTM E-84, NFPA 255 and UL 723, not exceeding Flame Spread of 25 and a Smoke Developed of 50. PVC fitting covers and accessories, such as adhesives, mastics, cements and cloth for fittings shall have the same component ratings.
 - 7. Paper laminate jackets shall be permanently flame and smoke resistant. Chemicals used for treating paper in jacket laminates shall not be water soluble and shall be unaffected by water and humidity.
 - 8. Fiberglass Schuler-Manville Micro-Lok, or equal.
- B. Irregular shape (fittings, flanges, valves, etc.)
 - 1. Fibrous glass of same density, thickness, and other properties or characteristics as the adjacent regular shape insulation, either pre-molded or field forged to fit the item being insulated. The pre-molded insulation shall be provided with weather protection cover.

2.3 IP-3 ELASTOMERIC FOAM

A. Insulation shall be Elastomeric Foam Insulation. Insulation should have a maximum service temperature of 210° F, a minimum service temperature of -40°F, and a "K" factor of 028 at 75°F. The flame spread of the insulation shall be 25 or less, and smoke density shall be 50 or less when tested in accordance with ASTM E84.

- B. Provide U.V. protective coating for all outdoor applications. Foster 30-64, Armacell WB Coating or K-Flex 374.
- C. K-Flex R-180-FS/R-1800-FS, Armacell Armaflex or equal.

2.4 IP-4 CLOSED CELL POLYOLEFIN

- A. Closed cell flexible plastic foam insulation should have a "k" factor of 0.27 or less at 75°F and water vapor permeability of .2 perm-inch or less. The manufacturer shall warrant the insulation to be able to be directly buried underground without any protective jacket.
- B. Closed Cell Polyolefin in tubular form shall comply with ASTM C-534, UL 94HBF, UBC 42-1 Class I, ASTM E-84 (25/50), NFPA 255 (25/50), UL 723(25/50), FMCSS-302, CAN-ULC-S102.2-M88 (25/50) Flammability Classification, MEA#267-92-M, New York.
- C. Provide U.V. protective coating for all outdoor applications.
- D. IMCOA Imcolock or equal.

2.5 IP-5 RIGID MOLDED SECTIONAL/INDOOR EXPOSED JACKET

- A. Regular shape (straight run)
 - Molded sectional, factory fabricated of heavy density resin bonded fibrous glass, with integral factory applied all service jacket of Kraft paper/aluminum foil/glass fiber reinforcement.
 - 2. Insulation shall have a thermal conductivity k factor of 0.23 at 75°F mean temperature and be suitable for direct application and service on piping having operating surface temperatures of -60° to 450°F.
 - 3. Jacket:
 - a. Straight runs: PVC fitting covers with vapor barrier.
 - b. Irregular shapes:
 - c. Zeston, Snap-Form, factory molded PVC covers, or
 - d. Mitered aluminum sheet matching straight run jacketing, or
 - e. Alternative jacketing: Schuler-Manville Type ML, metal jacketing system.
 - 4. All insulation shall have composite (insulation, jacket, tape seal and adhesive used to adhere jacket to the insulation). Fire and Smoke Hazard ratings as tested under procedure ASTM E-84, NFPA 255 and UL 723, not exceeding Flame Spread of 25 and a Smoke Developed of 50. PVC fitting covers and accessories, such as adhesives, mastics, cements and cloth for fittings shall have the same component ratings.
 - 5. Paper laminate jackets shall be permanently flame and smoke resistant. Chemicals used for treating paper in jacket laminates shall not be water soluble and shall be unaffected by water and humidity.
 - 6. Fiberglass Schuler-Manville Mico-Lok, or equal.
- B. Irregular shape (fittings, flanges, valves, etc.)

1. Fibrous glass of same density, thickness, and other properties or characteristics as the adjacent regular shape insulation, either pre-molded or field forged to fit the item being insulated. The pre-molded insulation shall be provided with PVC protection cover.

PART 3 - EXECUTION

3.1 PIPING APPLICATIONS

Note: Where multiple systems are listed, contractor has the option to choose.

- A. Domestic cold water (CW) piping above grade/indoors:
 - 1. Use System IP-3. (Elastomeric Foam) (R-value=6.0).
 - a. ½" thickness for all sizes
 - 2. Use System IP-4. (Closed Cell Polyolefin).
 - a. ½" thickness for all sizes
 - 3. Use System IP-1. (Rigid Molded Sectional/Indoor Jacket) with vapor barrier.
 - a. ½" thickness for all sizes smaller than 1". Use 1" thickness for 1" thru 4"
 - b. ½" thickness for all sizes smaller than 1". Use 1" thickness for 1" thru 4"
- B. Domestic cold water (CW) piping above grade/outdoors
 - 1. Use System IP-2. (Rigid Molded Sectional/Outdoor Jacket) with vapor barrier. R-value=9.0
 - a. $1\frac{1}{2}$ " thickness for all sizes
 - b. All piping shall have heat trace installed to protect from freezing. Coordinate with the electrical contractor.
- C. Domestic hot water (HW) above grade/outdoors
 - 1. Use System IP-2. (Rigid Molded Sectional/Outdoor Jacket) with vapor barrier.
 - a. All Sizes: 2" thick. R-value=14.0

3.2 INSTALLATION

- A. Unless specifically excluded herein or on the drawings, insulate all parts of hot piping systems, steam piping, and condensate drains including fittings, flanges, valves, and pipe-mounted devices, except do not cover nameplates on devices.
- B. Install insulation in removable sections over unions, flanges, and line components or devices requiring periodic maintenance.
- C. Install insulation butted tightly to transitions such as insulated pipe shields, insulated pipe sleeves, equipment connections, etc.
- D. Install insulation on piping systems so that condensation will not occur. Insulate pipe supports where hanger is directly in contact with pipe up to the point of connection to the building

structure. All piping shall be supported in such a manner that neither the insulation nor the vapor/weather barrier is compromised by the hanger or the effects of the hanger. In all cases, hanger spacing shall be such that the circumferential joint may be made outside the hanger. On cold systems, vapor barrier shall be continuous, including material covered by the hanger saddle.

E. Treat equipment face piping as follows:

- 1. Where piping is subject to condensation (domestic water systems) and where installed above grade outdoors (either hot or cold systems) insulate piping completely to the point of equipment connection.
- 2. Where not subject to condensation (hot systems) terminate insulation at the outlet side of the equipment shut-off valve, leaving the face piping un-insulated, 24" max, unless noted otherwise, except where exposed to outdoors.
- F. Install insulation materials with smooth and even surfaces. Insulate each continuous run of piping with full-length units of insulation, with single cut piece to complete run. Do not use cut pieces or scraps abutting each other. Butt insulation joints firmly to ensure complete, tight fit over all piping surfaces.
- G. Maintain the integrity of factory-applied vapor barrier jacketing on all pipe insulation, protecting it against puncture, tears or other damage. All staples used on cold pipe insulation shall be coated with Foster 30-65 or Childers CP-34 vapor barrier coating to maintain vapor barrier integrity.

H. Rigid Molded Sectional/Jacketed:

- 1. Comply with applicable general instructions above.
- 2. Apply to all hot water and piping (except where specified or noted otherwise) installed above grade indoors and outdoors, concealed or exposed.
- 3. Seal all transverse joints (except at PVC fitting jackets) with circumferentially applied 3" (minimum) width tape of same material as the jacket, faced with the same adhesive as the longitudinal lap, or seal with Hardcast 4" wide Type DT490-C mineral impregnated woven fiber tape (synthetic fiber indoors, cotton fiber outdoors) using Hardcast FTA-20 activator/adhesive applied by brush or roller. Seal transverse joints at PVC fittings jackets with color matching PVC tape and vapor barrier mastic adhesive.
- 4. Fittings and valves shall be insulated with pre-formed fiberglass fittings, fabricated sections of fiberglass pipe insulation, blanket insulation, or insulating cement. Thickness shall be equal to adjacent pipe insulation. Finish shall be with pre-formed PVC fitting covers or as otherwise specified on contract drawings.
- 5. Flanges, couplings and valve bonnets shall be covered with an oversized pipe insulation section sized to provide the same insulation thickness as on the main pipe section. An oversized insulation section shall be used to form a collar between the two insulation sections with low-density blanket insulation being used to fill gaps. Jacketing shall match that used on straight pipe sections. Rough-cut ends shall be coated with suitable weather or vapor resistant mastic as dictated by the system location and service.
- 6. On hot systems where fittings are to be left exposed, insulation ends should be beveled away from bolts for easy access.

- 7. On cold systems, particular care must be given to vapor sealing the fitting cover or finish to the pipe insulation vapor barrier. All valve stems shall be sealed with caulking to allow free movement of the stem but provide a seal against moisture incursion.
- 8. Fit insulation terminations with Zeston, Snap Form, end cap jackets, or seal with Hardcast tape as specified above for joints.
- 9. On all piping (except equipment face piping) installed outdoors, install outdoor jacketing. Install aluminum sheet jacket with all joints turned down at 45° below horizontal; secure in place with non-corroding bands and/or blind rivets (do not puncture vapor barrier insulation jacket). On equipment face piping (including equipment shut-off valve) coat the insulation with ½" thick Foster 46-50 or Childers CP-10/11 (weatherproofing) mastic reinforced with glass fabric and finished with two (2) coats of aluminum paint.

10. Penetrations

a. Extend piping insulation without interruption through walls, floors, and similar piping penetrations, except where otherwise specified.

I. Closed Cell Polyolefin:

- 1. Install pre slit, pre-glued closed cell polyolefin foam pipe insulation as per manufacturer's recommendations. Seal all joints and seams with Fuse-Seal Gun or with Armstrong 520 adhesive or equal in accordance with manufacturer's written instructions. Fabricate fitting covers from polyolefin foam insulation using same procedure.
- 2. Verify that work of this section may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.
- 3. In the event of discrepancy, immediately notify the Architect.
- 4. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.
- J. Install insulation in accordance with insulation manufacturer's instructions and as specified.
- K. Install faced insulation with facing to occupied room side. Install non-rated facing in contact with unexposed surface of finish materials.
- L. Trim insulation neatly to fit spaces. Fit insulation into crevices, spaces at outlet boxes and similar penetrations.
- M. Maintain continuous foil faced vapor barrier. Provide fire resistive tape at all edges or penetrations of foil faced insulation, including batt ends.

SECTION 221116 - DOMESTIC WATER PIPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Section 22 11 00, Facility Water Distribution applies to this section.

1.2 SUMMARY

- A. This section includes all plumbing (equipment, fixtures, pipe and fittings, specialties) inside the building(s) and outside the building(s) to the point of connection to site plumbing systems.
- B. Provide complete plumbing systems including:
 - 1. Service connections to existing on-site utilities, and stubs for future connection to equipment provided under the work of this Section or other Sections of the Specifications.
 - 2. All piping systems for conduction of cold water, heated water, soil, waste, fuel gas, and other fluids or gases as shown or specified for plumbing work.
 - 3. All valves, piping supports, piping penetration auxiliaries, piping protective coverings, piping, and other piping accessories as shown or specified for plumbing work.
 - 4. All plumbing equipment and auxiliary items as specified herein or shown on the drawings.
 - 5. No Pro-Press or similar copper pipe joining method will be accepted.

1.3 RELATED SECTIONS

- A. Section 220500 Plumbing
- B. Section 220700 Insulation

1.4 QUALITY ASSURANCE

A. All plumbing fixtures and equipment shall comply with California Code of Regulations, Title 24, Part 6, latest edition.

1.5 REFERENCES

A. Pipes and Tubes (See 2.03 for application of pipe to be used)

- 1. Hard Copper Tube: ASTM B88, Types K, L and M, water tube, drawn temper.
- 2. Soft Copper Tube: ASTM B88, Types K and L, water tube, annealed temper.

B. Fittings

- 1. Wrought-Copper, Solder-Joint Pressure Fittings: ANSI B16.22.
- 2. Cast-Copper-Alloy, Solder-Joint Pressure Fittings: ASME B16.18, ASTM B584.
- 3. Cast-Copper-Alloy, Threaded -Joint Pressure Fittings: ANSI/ASME B16.15, ASTM B584.
- 4. Bronze Flanges: ASME B16.24, Classes 150 and 300.
- 5. Copper Unions: ASME B16.18, cast-copper-alloy body, hexagonal stock, with ball-and-socket joint, metal-to-metal seating surfaces, and solder-joint, threaded, or solder-joint and threaded ends. Threads complying with ASME B1.20.1.

C. Joining Materials

- 1. Solder Filler Metal: ASTM B32, alloys to suit system requirements.
- 2. Brazing Filler Metals: AWS A5.8, alloys to suit system requirements.

1.6 STRUCTURAL REQUIREMENTS

A. Structural members shall not be cut or modified in any manner without specific instructions from the structural engineer and approval from DSA. Where possible, offset vents and pipes rising in walls, concealed above ceilings, below plates and rise through roof. Where this is not possible, install vents and pipes through plates as detailed on structural drawings.

1.7 SUBMITTALS

- A. Submit a general statement of materials and methods along with manufacturer's technical data and installation instructions for all equipment, fixtures, pipe and fittings, and plumbing specialties to be installed.
- B. Record Drawings: Per specification section 220500 requirements.
- C. Operation and Maintenance Manuals: Per specification section 220100 requirements.

PART 2 - PRODUCTS

2.1 GENERAL

A. Adapters: Wrought copper male adapters shall be used wherever it is necessary to connect copper tubing to a valve or "tee" having threaded connections.

2.2 PIPE, FITTING, AND JOINING MATERIALS

A. Copper Water Pipe (See 2.03 for application of pipe to be used)

- 1. Pipe: Above grade, Type M, L, or K hard drawn copper tubing per ASTM B-88, plain ends.
- 2. Fittings: Solder type, wrought copper per ANSI Standard B16.22 or cast red bronze per ANSI Standard B16.18. Do not use T-drill.
- 3. Unions: Solder type, cast red bronze.
- 4. Joining Materials/Methods
 - a. Canfield, Silvabrite or equal lead free solder with a non-corrosive water based flux.
 - b. 15% silver brazing alloy, water based silver brazing flux. Silver content must be clearly identified on the brazing rod.
- 5. Connections
 - a. Copper to dissimilar metals: dielectric connector.
 - b. Copper to threaded connections: cast brass adapters.

2.3 PIPE AND FITTING APPLICATIONS

- A. Inside Building (to 5'-0" outside building line).
 - 1. Water Piping: Above grade, Type L drawn temper, joining methods, soldered connections, below grade, Type K drawn temper copper tubing, joining methods, brazed connections.
 - 2. Plastic pipe and fittings shall not be used inside of buildings.

PART 3 - EXECUTION

3.1 PIPING

A. Water piping

- 1. Run water piping generally level. No piping shall be installed to cause an unusual noise from the flow of water under normal conditions.
- 2. Locate water hammer arrestors at all flush valve water branches to a single fixture and where two or more fixtures are located in a row or battery.
- 3. Adapters: Wrought copper male adapters shall be used wherever it is necessary to connect copper tubing to a valve or tee having threaded connections.
- 4. Install Bare Metal Pipe Isolators: Stoneman "Trisolator", Superstrut "Cush-a-strip", Unistrut on all hot and cold domestic water piping.

3.2 FIELD QUALITY CONTROL

A. Water Sterilization

- 1. Contractor shall provide all ports, valves and isolation of new piping for testing.
- 2. After installation and before installing valves or making final connections, flush or purge piping systems clean of foreign substances; use water to flush piping conducting liquids and compressed air to clear piping conducting gases.
- 3. After completing cold and heated water systems, disinfect in accordance with current requirements of U.S. Public Health Department. Use 50 parts per million of chlorine with 8 hour retention and flush to leave a residual no greater than supply source. Submit written certification of disinfecting completion by independent laboratory. After sterilization take at lease one (1) water sample per floor and have analyzed for "E-coli" to submit test results.

3.3 PIPING TESTING: TESTING CRITERIA

System	Medium	Pressure	Duration
Water	Water	150 psig	4 hours

SECTION 221119 – DOMESTIC WATER PIPING SPECIALTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Section 22 05 00 applies to this section.

1.2 SUMMARY

- A. This section includes all plumbing (equipment, fixtures, pipe and fittings, specialties) inside the building(s) and outside the building(s) to the point of connection to site plumbing systems.
- B. Provide complete plumbing systems including:
 - 1. Service connections to existing on-site utilities, and stubs for future connection to equipment provided under the work of this Section or other Sections of the Specifications.
 - 2. All piping systems for conduction of water as shown or specified for plumbing work.
 - 3. All valves, piping supports, piping penetration auxiliaries, piping protective coverings, piping, and other piping accessories as shown or specified for plumbing work.
 - 4. All plumbing equipment and auxiliary items as specified herein or shown on the drawings.

1.3 RELATED SECTIONS

- A. Section 22 05 00 Plumbing
- B. Section 22 07 00 Insulation

PART 2 - PRODUCTS

2.1 PIPING ACCESSORIES

- A. Unions
 - 1. Shall have the same pressure rating as pipe fittings.

B. Check Valves

- 1. Swing check, Class 125 Buna-N Disc, NIBCO or equal.
 - a. Sizes 2 inch and smaller: Fig. T-413; bronze body, threaded ends, plug type bonnet.
 - b. Size 2-1/2 inch and larger: Fig. F-968: iron body, brass mounted, flanged ends, bolted bonnet.

C. Strainers

- 1. Watts, Armstrong, Sarco, Arco, Sizes 4" and smaller, Watts Series 777, 400 psi WOG bronze body, threaded or soldered ends, 20 mesh stainless steel screen (up to 2 ½"), 3/64" perforated stainless steel screen (3"), 1/8" perforated stainless steel screen (4"), solid threaded screen retainer cap with gasket.
- 2. Reduced Pressure Back Flow Preventers
- 3. 3/4" to 2", Watts Series 909, provide bronze strainer, resilient seated full port bronze ball valves, air gap fitting and drain line, replaceable bronze seats.
- 4. 2-1/2" to 10", Watts Series 909, provide bronze strainer, non-rising stem resilient seated gate valve shut-offs, air gap fitting and drain line, replaceable bronze seats.

D. Water Pressure Reducing Valves

1. 3/4" to 3", Watts Series 223, provide y-strainer, replaceable stainless steel seat, bronze body construction, water tight sealed cage assembly, removable disc holder, low pressure model adjustable from 10-35 psi., high pressure model adjustable from 50 to 145 psi (1/2" to 1"), 50 to 120 psi (1 1/4"), and 50 to 95 (1 1/2" to 3").

E. Piping Penetration Auxiliaries

- 1. Sleeves Below Slab or Grade: Metraseal model MS or equal with schedule 80 PVC sleeve. The seal shall be capable of withstanding a hydrostatic pressure of 20 psig. The seal shall be constructed of synthetic rubber with heavy-duty plastic pressure plates. All bolts and nuts shall be constructed of stainless steel.
- 2. Escutcheons: Polished chrome plated brass or painted metal.

PART 3 - EXECUTION

3.1 EQUIPMENT

A. Install equipment in accordance with the manufacturer's installation instructions, as specified herein, and as detailed on the drawings.

3.2 EXTERIOR HOSE BIBBS

A. Install at 18 inches above finished grade.

3.3 VALVES, UNIONS AND FLANGES

- A. Valves shall be full size of line in which installed. Furnish discs suitable for service intended. All valves shall be properly packed and lubricated. Unions shall be placed adjacent to each threaded or soldered valve or equipment connection 2" and smaller. Install flanges at all valves with stems vertical wherever possible. Stems shall not be placed below horizontal.
- B. Install unions adjacent to each valve and at final connection to each piece of equipment.
- C. Valves shall be provided with brass identification tags indicating service controlled. Tags may be omitted on lines exposed in equipment rooms where service is obvious.
- D. Cathodic Protection: Install insulated flanges or dielectric unions at points of connection between pipes and equipment as follows: (1) between copper or brass piping and steel or cast iron pipe. (2) Between copper or brass piping and any steel material. (3) Buried connections of copper or brass piping to steel or cast-iron piping shall be protected with a polyvinyl tape wrap 10 mils thick, extending 5' each way from connection.
- E. Expansion: Install piping with sufficient offsets, loops, and/or swing-joints to allow for expansion and contraction. Anchor piping at equipment to restrain movement at those locations.
- F. Freeze Protection: Piping shall not be installed in a location subject to freezing conditions. All piping shall and must be installed on the "warm" side of building envelope insulation without exception. Where risers occur in outside walls, ensure that building insulation is adequate and intact. All piping must be drainable; provide drains required. All piping shall be run in or above heated portion of the building.

3.4 FIELD QUALITY CONTROL

A. Piping Testing: Testing Criteria

System	Medium	Pressure	Duration
Water	Water	150 psig	4 hours

SECTION 31 05 13 - SOILS FOR EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

A. All grading, earthwork, excavations, backfills, compaction, and other grading operations shall be accomplished in accordance with the soils report (which shall be a part of the contract documents). Contractor shall be responsible for securing a copy of the soils report. The project soils engineer shall be present during all grading operations. The soils engineer shall direct samples to be submitted and tests to be taken. Contractor shall cooperate with the requirements of the soils engineer.

B. Related Sections:

- 1. Section 31 22 13 Rough Grading.
- 2. Section 31 23 00 Excavation and Fill.
- 3. Section 31 23 23.13 Backfill.
- 4. Section 31 23 16.13 Trenching.
- 5. Section 32 12 16 Asphalt Pavement.
- 6. Section 32 11 23 Aggregate Base Course.
- 7. Section 32 96 00 Landscape Planting.

1.2 REFERENCES

A. The project Soils Report and any supplements to the Soils Report.

PART 2 PRODUCTS

2.1 TOPSOIL MATERIALS

- A. Topsoil materials shall meet to the requirements of Section 32 90 00 Planting.
- B. Class II Permeable Material shall meet the requirement of Caltrans Standard Specifications 68-1.025.

PART 3 EXECUTION

3.1 SOIL REMOVAL

A. Conduct earthwork operations in accordance with the provisions of the Soils Report and any supplements to the Soils Report, and as directed by the Soils Engineer.

SECTION 31 10 00 - SITE CLEARING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes removal of surface debris; removal of paving, curbs, sidewalks; removal of trees, shrubs, and other plant life; removal of underground storage tanks; and removal of abandoned utilities.
- B. Related Sections:
 - 1. Section 31 05 13 Soils for Earthwork.
 - 2. Section 31 22 13 Rough Grading.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.1 PREPARATION

- A. Verify that existing plant life designated to remain is tagged or identified.
- B. Removed materials are to be removed from the site and disposed of in a lawful manner.

3.2 PROTECTION

- A. Locate, identify, and protect utilities from damage that are to remain.
- B. Protect trees, plant growth, and features designated to remain.
- C. Protect benchmarks, survey control points, and existing structures from damage or displacement.

3.3 CLEARING

A. Clear areas required for access to site and execution of Work.

B. Remove trees and shrubs indicated and in a manner specified on the drawings or in these specifications. Remove tree and shrub root bulbs in their entirety and to a maximum root diameter of one inch.

3.4 REMOVAL

- A. Remove debris, rock, and extracted plant life from site to the limits indicated on the drawings.
- B. Remove paving, curbs, and concrete from the site to the limits indicated on the drawings.
- C. Neatly saw cut edges at limits indicated for all pavement, curbs, and walkways to be removed.
- D. Excavate and remove any underground storage tanks and associated plumbing piping, as indicated on the drawings.

3.5 TOPSOIL EXCAVATION

- A. Excavate topsoil from areas to be further excavated, relandscaped, or regraded, without mixing with foreign materials for use in finish grading.
- B. Stockpile on site and protect from erosion.
- C. Remove excess topsoil not intended for reuse, from site.

SECTION 31 22 13 - ROUGH GRADING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes removal of topsoil and cutting, grading, filling, rough contouring, and compacting as indicated on the drawings.
- B. Related Sections:
 - 1. Section 31 05 13 Soils for Earthwork.
 - 2. Section 31 10 00 Site Clearing.
 - 3. Section 31 23 00 Excavation and Fill.
 - 4. Section 31 23 16.13 Trenching.
 - 5. Section 31 23 23.13 Backfill.
 - 6. Section 32 96 00 Landscape Planting.

1.2 REFERENCES

A. The provisions of the project Soils Report and any supplements to the Soils Report shall be adhered to for rough grading of the site.

1.3 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 Execution and Closeout Requirements.
- B. Project Record Documents: Accurately record actual locations of utilities remaining by horizontal dimensions, elevations or inverts, and slope gradients.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Topsoil: as specified in Section 32 90 00 Planting.
- B. Other Fill Materials: shall adhere to the provisions of the project Soils Report and any supplements to the Soils Report.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements.
- B. Verify site conditions.
- C. Verify that survey benchmark and intended elevations for the Work are as indicated.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum.
- B. Stake and flag locations of known utilities.
- C. Locate, identify, and protect from damage utilities that are to remain.
- D. Notify affected utility companies to remove or relocate public utilities indicated on the plans to be removed or relocated by the utility company.
- E. Protect above and below grade utilities that are to remain.
- F. Protect plant life, lawns, and other features remaining as a portion of final landscaping.
- G. Protect bench marks, survey control point, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.

3.3 SOIL EXCAVATION

- A. Excavate soil from areas to be further excavated, relandscaped, or regraded. as shown on the drawings.
- B. When excavating through roots, for trees to remain, perform work by hand and cut roots with sharp axe.
- C. Remove excess soil from site.
- D. Benching Slopes: Horizontally bench existing slopes steeper than 1:4 (vertical:horizontal) to key placed fill material to slope to provide firm bearing as required by the Soils Report and any supplements to the Soils Report. Minimum horizontal bench shall be 2 feet wide.
- E. Stability: Replace damaged or displaced subsoil to same requirements as for specified fill.

3.4 FILLING

- A. Install Work in accordance with the project Soils Report and any supplements to the Soils Report.
- B. Fill areas to contours and elevations with suitable materials.
- C. Place fill material on continuous layers and compact in accordance with the project Soils Report and any supplements to the Soils Report.
- D. Maintain optimum moisture content of fill materials to attain required compaction density.
- E. Slope grade away from buildings at a minimum slope of two (2%) percent unless noted otherwise.
- F. Make grade changes gradual. Blend slope into level areas.
- G. Remove surplus fill materials from site.

3.5 TOLERANCES

- A. Section 01 40 00 Quality Requirements.
- B. Top Surface of Subgrade: Plus or minus 0.05 feet from required elevation on paved or walkway areas and zero (0) feet to minus 0.10 foot in building pad areas.

3.6 FIELD QUALITY CONTROL

- A. Testing and inspection shall be provided by the project soils engineer.
- B. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at the Contractor's sole expense.

SECTION 31 23 00 - EXCAVATION AND FILL

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes excavating for building foundations, roads, parking areas, site grading, slabs-on-grade, landscaping areas, and for site structures.
- B. Related Sections:
 - 1. Section 31 05 13 Soils for Earthwork.
 - 2. Section 31 22 13 Rough Grading.
 - 3. Section 31 23 16.13 Trenching.
 - 4. Section 31 23 23.13 Backfill.

1.2 REFERENCES

- A. The project Soils Report and any supplements to the Soils Report.
- B. Local utility standards when working within 24 inches of the respective utility lines.

PART 2 PRODUCTS

- A. Bio-Retention Soils
 - 1. Permeable Class II Aggregate Base or crushed drain rock.
 - 2. Planting soil is 60% sand, 40% compost mix allowing 5"/hour percolation.

PART 3 EXECUTION

3.1 PREPARATION

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

3.2 EXCAVATING

- A. Underpin adjacent structures which may be damaged by excavating work.
- B. Excavate subsoil to accommodate building foundations, slabs-on-grade, paving and site

structures.

- C. Compact disturbed load bearing soil in direct contact with foundations to original bearing capacity; perform compaction in accordance with Section 31 23 23.13 and 31 23 16.13.
- D. Slope banks with machine to angle of repose or less until shored.
- E. Do not interfere with 45 degree bearing splay of foundations.
- F. Grade top perimeter of excavating to prevent surface water from draining into excavation.
- G. Hand trim excavation. Remove loose matter.
- H. Remove lumped subsoil, boulders, and rock in accordance with the provisions of the Soils Report and any supplements to the Soils Report.
- I. Notify Architect/Engineer of unexpected subsurface conditions and discontinue affected Work in area until notified to resume Work.
- J. Correct areas over excavated with backfill and compact replacement as specified for authorized excavation.
- K. Remove excess excavated material from site.

3.3 FIELD QUALITY CONTROL

A. The project Soils Engineer shall provide testing and inspection services.

3.4 PROTECTION

- A. Prevent displacement or loose soil from falling into excavation; maintain soil stability.
- B. Protect structures, utilities and other facilities from damage caused by settlement, lateral movement, undermining, washout, and other hazards created by earth operations.

SECTION 31 23 16.13 - TRENCHING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes excavating trenches for utilities from outside building to final connection point or public right-of-way or utility; compacted fill from top of utility bedding to subgrade elevations; and backfilling and compaction.
- B. Related Sections:
 - 1. Section 31 05 13 Soils for Earthwork.
 - 2. Section 31 22 13 Rough Grading.
 - 3. Section 31 23 00 Excavation and Fill.
 - 4. Section 31 23 23.13 Backfill.
 - 5. Section 32 96 00 Landscape Planting.
 - 6. Section 33 30 00 Sanitary Sewerage Utilities.
 - 7. Section 33 40 00 Storm Drainage Utilities.
 - 8. Section 03 30 00 Cast-in-Place Concrete.

1.2 REFERENCES

A. The project Soils Report and any supplements to the Soils Report.

1.3 DEFINITIONS

A. Utility: Any buried pipe, duct, conduit, or cable.

1.4 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

1.5 COORDINATION

- A. Section 01 30 00 Administrative Requirements.
- B. Verify Work associated with lower elevation utilities is complete before placing higher elevation utilities.
- C. Verify elevations of existing facilities prior to placing new Work.

PART 2 PRODUCTS

2.1 FILL MATERIALS

A. Fill and Structural Fill shall be: As specified in the project Soils Report and any supplements to the Soils Report.

2.2 ACCESSORIES

A. Filter Fabric: Non-biodegradable, woven as manufactured by TC Mirafi, Tenax Corp., Tensar Earth Technologies, Inc. or equal.

PART 3 EXECUTION

3.1 LINES AND GRADES

A. Grades

- 1. Pipes shall be laid true to the lines and grades indicated.
- 2. The grade alignment of the pipe shall be maintained by the use of a string line parallel with the grade line and vertically above the centerline of the pipe. This line shall be established on level batter boards at intervals of not more than 25 feet. Batter boards shall span the trench and be rigidly anchored to substantial posts driven into the ground on each side of the trench. Three adjacent batter boards must be set before laying pipe to provide a check on the grades and line. Elevation and position of the string line shall be determined from the elevation and position of offset points or stakes located along the pipe route. Pipe shall not be laid using side lines for line or grade.
- 3. As an alternative means of establishing alignment and grade, a "Laser-Beam" instrument may be utilized with a competent operator.

B. Location of Pipe Lines:

- 1. The location and approximate depths of the proposed pipe lines are shown on the Drawings.
- 2. An underground locate service shall be enlisted to discover the location of existing utilities regardless if they are shown on the drawings.
- 3. The Architect/Engineer reserves the right to make changes in lines, grades, and depths of pipe lines and manholes when such changes are necessary.

3.2 PREPARATION

- A. Identify required lines, levels, contours, and datum locations.
- B. Protect plant life, lawns, and other features remaining as a portion of final

landscaping.

- C. Protect bench marks, existing structures, fences, sidewalks, paving, and curbs from excavating equipment and vehicular traffic.
- D. Maintain and protect above and below grade utilities which are to remain.
- E. Cut out soft areas of subgrade not capable of compaction in place. Backfill and compact to density equal to or greater than requirements for subsequent backfill material.

3.3 EXCAVATING

- A. Excavate subsoil required for utilities.
- B. Cut trenches sufficiently wide to enable installation and allow inspection. Remove water or materials that interfere with Work.
- C. Do not interfere with 45 degree bearing splay of foundations.
- D. Hand trim excavation. Hand trim for bell and spigot pipe joints. Remove loose matter.
- E. Remove lumped subsoil, boulders, and rock as directed by the Soils Engineer or other inspector.
- F. Correct over excavated areas with backfill and compact replacement as specified for authorized excavation.
- G. Stockpile excavated material on site. Remove excess material not being used from site.

3.4 TRENCHING

A. Excavations:

1. Excavation shall be dug so that the pipe can be laid and jointed properly. The trench shall be made so that the pipe can be laid to the alignment and depth as shown on the Drawings, and it shall be excavated only so far in advance of pipe laying as permitted by the Architect/Engineer. The excavation shall not be more than two feet wider at the bottom than the outside diameter of the pipe or structure. If there is no interference with construction, or adjacent property, and if soil permits, the Contractor at his own expense shall be permitted to slope the side walls of the excavation starting at a point two (2) feet above the top of pipe.

- 2. The trench shall be excavated to the depth required so as to provide a uniform and continuous bearing and support for the pipe on bedding material at every point between joints, except where pipe slings or other lifting tackle are withdrawn.
- 3. Excavation Below Grade:
 - 1) Where excavation indicates that the subsurface materials at the bottom of the trench are in a loose or soft state, the Contractor shall be advised to excavate to a depth where suitable material is encountered, as directed by the Architect/Engineer.
 - Where the bottom of the trench has been excavated by mistake to a greater depth than required, the Contractor shall refill this area using approved material. No additional compensation shall be given to the Contractor. Refilling with earth to bring the bottom of the trench to the proper grade will not be permitted.
- 4. Excavation within 24 inches of existing utilities shall be governed by specifications of the Owner of the respective utility. The Contractor shall obtain these specifications and follow the same at no extra cost.
- 5. Excavation and shoring shall adhere to the requirements and safety standards set by OSHA.
- B. Trenching in Advance of Pipe Laying: The trench for the pipe lines shall not be opened for a distance of more than 200 feet at any one time, unless authorized by the Architect/Engineer. At no time will the Contractor be permitted to leave more than 50 feet of trench open at the end of a working day. Adequate protection of open trench shall be provided by the Contractor and the Contractor shall be responsible therefore.

3.5 SHEETING AND BRACING

A. General:

- 1. Sheeting and bracing of all excavations shall conform to the latest statutes of the State of California governing safety of workers in the construction industry. When necessary, in the opinion of the Contractor, adequate sheeting and bracing shall be installed to prevent ground movement that may cause damage or settlement to adjacent structures, pipelines and utilities. Any damage due to settlement because of failure to use sheeting or because of inadequate bracing, or through negligence or fault of the Contractor in any other manner, shall be repaired at the Contractor's expense.
- 2. Sides of trenches in unsuitable, loose or soft material, five feet or more in depth, shall be shored, sheeted, braced, sloped, or otherwise supported by means of sufficient strength to protect employees working within them.

B. Sheeting Requirements:

- 3. Where excavations are made with vertical sides which require supporting, the sheeting and bracing shall be of sufficient strength to sustain the sides of the excavations and to prevent movement which could in any way injure the Work, or adjacent structures, or diminish the working space sufficiently to delay the Work. Special precautions shall be taken where there is additional pressure due to the presence of other structures.
- 4. It shall be the Contractor's responsibility to select sheeting and bracing of sufficient dimensions and strength and type to adequately support the sides of trenches and excavations.
- 5. Sheeting and bracing shall be removed before the completion of the Work.

3.6 BACKFILLING

- A. Backfill trenches to contours and elevations shown on the drawings.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, or spongy subgrade surfaces.
- C. Fill materials shall be as specified in the Soils Report and any supplements to the Soils Report.
- D. Employ a placement method that does not disturb or damage utilities in trench. Jetting of backfill materials to achieve compaction shall not be permitted.
- E. Maintain optimum moisture content of fill materials to attain required compaction density.
- F. Remove surplus fill materials from site.

3.7 TOLERANCES

- A. Section 01 45 00 Quality Requirements.
- B. Top Surface of Backfilling Under Paved Areas: Plus or minus 0.05 feet from required elevations.
- C. Top Surface of General Backfilling: Plus or minus 1/10 feet from required elevations.

3.8 FIELD QUALITY CONTROL

- A. Compaction testing will be performed by the project Soils Engineer.
- B. If tests indicate Work does not meet specified requirements, remove Work, replace,

compact, and retest.

3.9 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 Execution and Closeout Requirements.
- B. Reshape and re-compact fills subjected to vehicular traffic during construction.

SECTION 31 23 23.13 - BACKFILL

PART 1 GENERAL

1.1 SUMMARY

A. Section includes building perimeter and site structure, filling and backfilling to subgrade elevations; fill under slabs-on-grade, paving; fill for over-excavation; consolidation and compaction as specified in the Soils Report and any supplements to the Soils Report.

B. Related Sections:

- 1. Section 31 05 13 Soils for Earthwork.
- 2. Section 31 23 00 Excavation and Fill.
- 3. Section 31 23 16.13 Trenching.
- 4. Section 32 96 00 Landscape Planting.
- 5. Section 03 30 00 Cast-in-Place Concrete.

1.2 REFERENCES

A. The project Soils Report and any supplements to the Soils Report.

PART 2 PRODUCTS

2.1 FILL MATERIALS

A. Fill and Structural Fill as specified in the Soils Report and any supplements to the Soils Report.

2.2 ACCESSORIES

A. Geotextile Fabric: Non-biodegradable, woven as manufactured by TC Mirafi, Tensar Earth Technologies, Inc. or equal.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify subdrainage, dampproofing, or waterproofing installation has been inspected.
- C. Verify structural ability of unsupported walls to support loads imposed by the fill.

3.2 PREPARATION

A. Compact subgrade to density requirements for subsequent backfill materials.

- B. Cut out soft areas of subgrade not capable of compaction in place. Backfill and compact to density equal to or greater than requirements for subsequent fill material.
- C. Roll subgrade surface to identify soft spots; fill and compact to density equal to or greater than requirements for subsequent fill material.

3.3 BACKFILLING

- A. Backfill areas to contours and elevations shown on drawings.
- B. Employ a placement method that does not disturb or damage other work.
- C. Maintain optimum moisture content of backfill materials to attain required compaction density.
- D. Backfill against supported walls and structures. Do not backfill against unsupported walls or structures.
- E. Backfill simultaneously on each side of unsupported walls and structures until supports are in place.
- F. Slope grade away from building at a minimum slope of two (2%) percent, unless noted otherwise.
- G. Make gradual grade changes. Blend slope into level areas.
- H. Remove surplus backfill materials from site.

3.4 TOLERANCES

- A. Section 01 40 00 Quality Requirements.
- B. Top Surface of Backfilling Under Paved Areas: Plus or minus 0.05 feet from required elevations.
- C. Top Surface of General Backfilling: Plus or minus 1/10 feet from required elevations.

3.5 FIELD QUALITY CONTROL

A. The project Soils Engineer shall provide testing and inspection services.

3.6 PROTECTION OF FINISHED WORK

- A. Section 01 70 00 Execution and Closeout Requirements.
- B. Reshape and re-compact fills subjected to vehicular traffic.

SECTION 32 11 23 - AGGREGATE BASE COURSE

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes aggregate base course.
- B. Related Sections:
 - 1. Section 31 05 13 Soils for Earthwork.
 - 2. Section 31 22 13 Rough Grading.
 - 3. Section 31 23 23.13 Backfill.
 - 4. Section 31 23 16.13 Trenching.
 - 5. Section 32 12 16 Asphalt Pavement.
 - 6. Section 32 13 13 Concrete Paving.
 - 7. Section 33 49 13 Storm Drainage Manholes, Frames, and Covers.

PART 2 PRODUCTS

2.1 MATERIALS

A. Class II Aggregate Base per Caltrans Standard Specifications, or Local Municipality.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify substrate has been inspected, gradients and elevations are correct, and is dry.

3.2 PREPARATION

- A. Correct irregularities in substrate gradient and elevation by scarifying, reshaping, and re-compacting.
- B. Do not place fill on soft, muddy, or frozen surfaces.

3.3 AGGREGATE PLACEMENT

- A. Place aggregate in maximum 6-inch layers and compact to specified density.
- B. Level and contour surfaces to elevations and gradients indicated.
- C. Add small quantities of fine aggregate to coarse aggregate as appropriate to assist compaction.
- D. Add water to assist compaction. If excess water is apparent, remove aggregate and aerate to reduce moisture content.
- E. Use mechanical tamping equipment in areas inaccessible to compaction equipment.

3.4 TOLERANCES

- A. Section 01 40 00 Quality Requirements: Tolerances.
- B. Flatness: Maximum variation of 1/4 inch measured with 10-foot straight edge.
- C. Scheduled Compacted Thickness: Within 1/4 inch.
- D. Variation From Design Elevation: Within 1/2 inch.

3.5 FIELD QUALITY CONTROL

- A. Section 01 40 00 Quality Requirements: Testing and inspection services.
- B. Compaction testing will be performed in accordance with ASTM D1557.
- C. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to owner.

SECTION 32 13 13 - CONCRETE PAVING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes concrete sidewalks, integral curbs, gutters, parking areas, driveways, and roads; and aggregate base course.
- B. Related Sections:
 - 1. Section 31 22 13 Rough Grading.
 - 2. Section 31 23 23.13 Backfill.
 - 3. Section 32 11 23 Aggregate Base Course.
 - 4. Section 32 96 00 Landscape Planting.
 - 5. Section 33 49 13 Storm Drainage Manholes, Frames, and Covers.

1.2 REFERENCES

- A. ACI 304 (American Concrete Institute) Recommended Practice for Measuring, Mixing, Transporting and Placing Concrete.
- B. ASTM A185 Welded Steel Wire Fabric for Concrete Reinforcement.
- C. ASTM A497 Welded Deformed Steel Wire Fabric for Concrete Reinforcement.
- D. ASTM A615 DeformeM and Plain Billet-Steel for Concrete Reinforcement.
- E. ASTM C33 Concrete Aggregates.
- F. ASTM C94 Ready Mix Concrete.
- G. ASTM C150 Portland Cement
- H. ASTM C260 Air-Entraining Admixtures for Concrete.
- I. ASTM C309 Liquid Membrane-Forming Compounds for Curing Concrete.
- J. ASTM C494 Chemical Admixtures for Concrete.
- K. ASTM D1751 Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction.
- L. ASTM D1752 Preformed Sponge Rubber and Cork Expansion Joint Fillers for

Concrete Paving and Structural Construction.

1.3 QUALITY ASSURANCE

- A. Perform Work in accordance with requirements of Local Municipality.
- B. Maintain one copy of each document on site.
- C. Obtain cementitious materials from same source throughout.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 Product Requirements.
- B. Do not place concrete when base surface temperature is less than 40 degrees, or surface is wet or frozen.

PART 2 PRODUCTS

2.1 FORM MATERIALS

- A. Wood or Steel form material, profiled to suit conditions.
- B. Joint Filler: ASTM D1751.

2.2 REINFORCEMENT

- A. Reinforcing Steel: ASTM A615; Grade 60 deformed billet steel bars; unfinished.
- B. Welded Steel Wire Fabric: Plain type, ASTM A185 in flat sheets or coiled rolls; unfinished.
- C. Dowels: ASTM A615; plain steel, unfinished.

2.3 CONCRETE MATERIALS

- A. Concrete Materials: As specified in Section 03 30 00. Provide in accordance with local municipality Public Work's standards.
- B. Portland Cement: ASTM C 150, Type V, conforming to ACI 318-14 and test in accordance with Section 1903A, 2019 C.B.C.
- C. Fly Ash content per local Municipality Public Work's Standards.

2.4 CONCRETE MIX - BY PERFORMANCE CRITERIA

- A. Provide concrete to the following criteria:
 - 1. Compressive Strength: 3000 psi @ 28 days.
 - 2. Water to cement (W/C) ratio of no more than 0.45.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify compacted subgrade or granular base is acceptable and ready to support paving and imposed loads.
- C. Verify gradients and elevations of base are correct.

3.2 SUBBASE

A. Section 32 11 23 - Aggregate Base Course forms the base construction for Work of this section.

3.3 PREPARATION

- A. Moisten base to minimize absorption of water from fresh concrete.
- B. Coat surfaces of manhole and catch basin frames with oil to prevent bond with concrete pavement.
- C. Notify Architect/Engineer minimum 24 hours prior to commencement of concreting operations.

3.4 FORMING

- A. Place and secure forms to correct location, dimension, profile, and gradient.
- B. Assemble formwork to permit easy stripping and dismantling without damaging concrete.
- C. Place joint filler vertical in position, in straight lines. Secure to formwork during concrete placement.

3.5 REINFORCEMENT

- A. Place reinforcement as indicated on drawings.
- B. Interrupt reinforcement at expansion joints.
- C. Place reinforcement to achieve pavement and curb alignment as detailed.

3.6 PLACING CONCRETE

- A. Place concrete in accordance with local municipality Public Work's standards.
- B. Ensure reinforcement, inserts, embedded parts, formed joints and are not disturbed during concrete placement.
- C. Place concrete continuously over the full width of the panel and between predetermined construction joints.
- D. Place concrete to pattern indicated on drawings.

3.7 JOINTS

- A. Place expansion and contraction joints as shown on drawings. Align curb, gutter, and sidewalk joints.
- B. Place joint filler between paving components and building or other appurtenances. Recess top of filler 1/4 inch for sealant placement.
- C. Provide scored sawn joints as indicated on drawings and between sidewalks and curbs.

3.8 EXPOSED AGGREGATE

A. See Landscape Drawings and Specifications.

3.9 FINISHING

- A. Sidewalk Paving: Light broom perpendicular to path of travel and trowel joint edges.
- B. Curbs and Gutters: Light broom in direction of flow.
- C. Direction of Texturing: Transverse to pavement direction.

- D. Inclined Vehicular Ramps: Broomed perpendicular to slope.
- E. Place curing compound on exposed concrete surfaces immediately after finishing.

3.10 JOINT SEALING

- A. Separate pavement from vertical surfaces with thick joint filler.
- B. Place joint filler in pavement pattern placement sequence. Set top to required elevations. Secure to resist movement by wet concrete.
- C. Extend joint filler from bottom of pavement to within 1/8 inch of finished surface. Conform to joint sealer manufacturer requirements.

3.11 TOLERANCES

- A. Section 01 40 00 Quality Requirements: Tolerances.
- B. Maximum Variation of Surface Flatness: 1/4 inch in 10 feet.
- C. Maximum Variation From True Position: 1/2 inch.

3.12 FIELD QUALITY CONTROL

- A. Section 01 40 00 Quality Requirements: Testing and inspection services Section 01 70 00 Execution and Closeout Requirements: Testing, adjusting, and balancing.
- B. Testing firm will take cylinders and perform slump [and air entrainment] tests in accordance with ACI 301.
- C. One slump test will be taken for each set of test cylinders taken.
- D. Maintain records of placed concrete items. Record date, location of pour, quantity, air temperature, and test samples taken.

3.13 PROTECTION

- A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury.
- B. Do not permit pedestrian or vehicular traffic over pavement for 7days minimum after finishing.

SECTION 323119 - DECORATIVE METAL FENCES AND GATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Swing gates.
 - 2. Horizontal-slide gates.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For fencing and gates.
 - 1. Include plans, elevations, sections, gate locations, post spacing, and mounting attachment details.
- C. Samples: For each fence material and for each color specified.
 - 1. Provide Samples 12 inches (300 mm) in length for linear materials.

1.4 INFORMATIONAL SUBMITTALS

A. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

PART 2 - PRODUCTS

2.1 DECORATIVE STEEL FENCES

A. Decorative Steel Fences: Fences made from steel tubing bars and shapes.

- B. Posts: Square steel tubing.
 - 1. Line Posts: As indicated.
 - 2. End and Corner Posts: As indicated.
 - 3. Swing Gate Posts: As indicated.
 - 4. Horizontal-Slide Gate Post, Openings Wider Than 12 Feet (3.7 m): As indicated.
- C. Post Caps: Formed from steel sheet.
- D. Rails:
 - 1. Steel Tube Rails: Square steel tubing 2 by 2 inches (51 by 51 mm) with 1/4-inch (6.35-mm) wall thickness.
- E. Pickets: 1 inch (25 mm) square by 14 gauge steel tubes.
 - 1. Terminate tops of pickets at top rail for flush top appearance.
 - 2. Picket Spacing: 4 inches (101.6 mm) clear, maximum.
- F. Infill: Custom design as indicated on Drawings.
 - 1. Perforated Metal Sheet: Uncoated steel sheet, perforated as indicated, 18 ga nominal thickness.
- G. Fasteners: Stainless-steel carriage bolts and tamperproof nuts.
- H. Fabrication: Assemble fences into sections by welding pickets to rails.
 - 1. Fabricate sections with clips welded to rails for field fastening to posts.
 - 2. Drill posts and clips for fasteners before finishing to maximum extent possible.
- I. Finish exposed welds to comply with NOMMA Guideline 1, Finish #2 completely sanded joint, some undercutting and pinholes okay.
- J. Finish for Steel Items: Primed.

2.2 SWING GATES

- A. Gate Configuration: As indicated.
- B. Gate Frame Height: As indicated.
- C. Gate Opening Width: As indicated.
- D. Posts: Square steel tubing.

- 1. Swing Gate Posts: As indicated.
- E. Post Caps: Formed from steel sheet.
- F. Rails:
 - 1. Steel Tube Rails: Square steel tubing 2 by 2 inches (51 by 51 mm) with 12 GA (2.6-mm) wall thickness.
- G. Pickets: 1 inch (25 mm) square by 14 gauge steel tubes.
 - 1. Terminate tops of pickets at top rail for flush top appearance.
 - 2. Picket Spacing: 4 inches (101.6 mm) clear, maximum.
- H. Hardware: As indicated on Drawings.
- I. Finish exposed welds to comply with NOMMA Guideline 1, Finish #2 completely sanded joint, some undercutting and pinholes okay.
- J. Steel Finish: Primed.

2.3 HORIZONTAL-SLIDE GATES

- A. Gate Configuration: As indicated.
- B. Gate Frame Height: As indicated.
- C. Gate Opening Width: As indicated.
- D. Steel Frames and Bracing: Fabricate members from square tubing.
 - 1. Frame Members: Steel tubing 2 x 2 inches (64 by 64 mm) with 1/4-inch (6.35-mm) wall thickness.
 - 2. Bracing Members: Steel tubing 2 x 2 inches (64 by 64 mm) with 1/4-inch (6.35-mm) wall thickness.
- E. Frame Corner Construction:
 - 1. Welded frame.
- F. Additional Rails: Provide as indicated, complying with requirements for fence rails.

- G. Infill: Comply with requirements for adjacent fence.
- H. Picket Size, Configuration, and Spacing: Comply with requirements for adjacent fence.
- I. Hardware: As indicated on Drawings.
- J. Finish exposed welds to comply with NOMMA Guideline 1, Finish #2 completely sanded joint, some undercutting and pinholes okay.
- K. Steel Finish: Primed.

2.4 STEEL AND IRON

- A. Plates, Shapes, and Bars: ASTM A36/A36M.
- B. Bars (Pickets): Hot-rolled, carbon steel complying with ASTM A29/A29M, Grade 1010.
- C. Tubing: ASTM A500/A500M, cold-formed steel tubing.
- D. Uncoated Steel Sheet: Hot-rolled steel sheet, ASTM A1011/A1011M, Structural Steel, Grade 45 (Grade 310) or cold-rolled steel sheet, ASTM A1008/A1008M, Structural Steel, Grade 50 (Grade 340).

2.5 MISCELLANEOUS MATERIALS

- A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.
- B. Concrete: Normal-weight, air-entrained, ready-mix concrete complying with requirements in Section 033000 "Cast-in-Place Concrete" with a minimum 28-day compressive strength of 3000 psi (20 MPa), 3-inch (75-mm) slump, and 1-inch (25-mm) maximum aggregate size or dry, packaged, normal-weight concrete mix complying with ASTM C387/C387M mixed with potable water according to manufacturer's written instructions.
- C. Nonshrink Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M and specifically recommended by manufacturer for exterior applications.

2.6 STEEL FINISHES

- A. Comply with local VOC limitations of authorities having jurisdiction and the California Green Building Code. Verify compatibility with finish coats specified in other sections.
- B. Surface Preparation: Clean surfaces according to SSPC-SP6/NACE No. 3 Commercial Blast Clean to create a dense, angular and uniform surface profile of 1.5 mils minimum.

- C. Primer Application: Apply two-component, moisture-cured, zinc-rich primer, immediately after cleaning, to provide a minimum dry film thickness of 2.5 to 3.5 mils per applied coat, to surfaces that are exposed after assembly and installation, and to concealed surfaces.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Tnemec; Teneme-Zinc Series 90-97
- D. Apply intermediate and topcoats to prime-coated surfaces. Comply with coating manufacturer's written instructions and with requirements in SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting. Apply at spreading rates recommended by coating manufacturer.
- E. Stipe-coat procedure to prevent edge rusting: Apply polyamidoamine epoxy stipe coat by brush to all primed welds, voids, nuts, bolts and sharp edges referencing Paint Application Guide No. 11 for protecting corners, edges, crevices and irregular steel geometries.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Tnemec; Series V69 Hi-Build Epoxoline II
 - b. Color as selected by Architect from manufacturer's full range of standard colors.
- F. Intermediate Coat: Apply polyamidoamine epoxy intermediate coat with a minimum dry film thickness of 3.0 to 5.0 mils.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Tnemec; Series V69 Hi-Build Epoxoline II
- G. Finish Coat: Apply water-based, low VOC, High Dispersion Pure acrylic polymer coating by spray application to provide a minimum dry film thickness of 2.5 to 3.5 mils.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 DECORATIVE FENCE INSTALLATION

- A. Post Setting: Set posts with mechanical anchors at indicated spacing into firm, undisturbed soil.
 - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.

3.3 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

3.4 ADJUSTING

- A. Gates: Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Lubricate hardware and other moving parts.