

**Diablo Valley College
Horticulture Lab Renovations**

Note: Specifications have not been DSA approved yet. Addendum with DSA approved drawings will be uploaded before bid due date.

Division 01

May 3, 2022

PREPARED BY:



VERDE DESIGN

Project No. 2018201
DSA No. 01-119988

**Diablo Valley College
Horticulture Lab Renovations
DSA SIGNATURE SHEET**

OWNER

DIABLO VALLEY COLLEGE – PLEASANT HILL
321 GOLF CLUB ROAD
PLEASANT HILL, CA 94523

CIVIL ENGINEER/ LANDSCAPE ARCHITECT

VERDE DESIGN, INC.
2455 THE ALAMEDA
SANTA CLARA, CA 95050



DIVISION OF THE STATE ARCHITECT

CIVIL ENGINEER

DOCUMENT 00 01 10

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SUMMARY OF WORK

1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of this Contract consists of renovations to the existing Diablo Valley College Horticulture Lab including, but not necessarily limited to, the following:
 - 1. Removal and replacement of existing concrete flatwork
 - 2. Installation of trench drain system
 - 3. Upgrades to storm drain and recycled water infrastructure
- B. The Work specifically includes all work as represented by the Drawings and Specifications issued for construction and subsequent approved revisions and addenda.
- C. If certain features are not fully shown or called for on the Drawings, their construction shall be of the same character, quality and level of performance as for similar conditions that are shown, called for, or reasonably inferred.

1.02 RELATED REQUIREMENTS

- A. Section 01 42 00 - References.

1.03 PROJECT LOCATION

- A. Diablo Valley College
321 Golf Club Road
Pleasant Hill, CA 94523.
- B. The general nature and extent of the work and the appurtenant facilities are shown on the Drawings under the title: Diablo Valley College Horticulture Lab Renovations.
- C. Perform work within the Limit of Work line indicated on the Drawings and per the discretion of the Owner.

1.04 SPECIFICATIONS AND DRAWINGS

- A. The General Conditions, Supplementary Conditions, and Division 01 - General Requirements apply to the Work of all Sections.
- B. Drawings, such as irrigation plans, utility plans, and other utility Drawings, are diagrammatic. Actual runs indicated on the Drawings shall be followed as closely as coordination with the work of other trades will permit. The exact routing of such improvements and locations of equipment shall be governed by site conditions, obstructions, and locations of other utilities as acceptable to the Owner.
- C. In the event that discrepancies arise over dimensions, product references, omissions, or written statements, these conflicts shall be immediately brought to the Owner's attention by the Contractor. If available, this may be accomplished with the use of a "Request for Information" (RFI) form. While awaiting direction or clarification from the Owner, the Contractor shall re-direct work as necessary so as not to cause delay to the project.
- D. If discrepancies arise between the Drawings and Specifications, the order of descending precedence shall be:
 - 1. Specifications.

2. Details on the Drawings.
 3. Plans on the Drawings.
- E. Products, materials, labor, etc., installed or performed without proper clarification, or prior to Owner acceptance shall be the Contractor's sole responsibility and shall be removed, repaired, replaced, and/or reinstalled per the Owner's direction at no additional cost to the Owner or its agents.

1.05 CONTRACTOR'S DUTIES

- A. Provide and pay for:
1. Labor, materials, equipment, tools, construction equipment machinery, and other facilities and services necessary for proper execution and completion of the Contract.
 2. Water and temporary utilities required for construction excluding any metering and connection fees or charges.
 3. Subject to the discretion of the Owners Representative as verified by the Contractor, utilities which are in place and/or are in use by the Owner at the site, excluding telephone, may be utilized by the Contractor, to the extent available, at no cost.
 4. Other facilities and services necessary for proper execution and completion of work to provide a facility capable of operation.
 5. Legally required sales, consumer, and use taxes.
- B. Permits:
1. The Owner shall obtain and pay for the building permits, utility cut-offs and hook-ups including, but not limited to: water, gas, and electrical meters, sanitary and storm sewer connection fees.
 2. The contractor shall obtain and pay for other permits required by Owner, County and other agencies, including but not limited to business licenses and hauling and dumping permits as applicable.
 3. Provisions of required permits and licenses, whether obtained by the Owner's Representative or the contractor, shall become a part of the Contract Documents and shall be adhered to by the contractor.
- C. Comply with latest adopted edition of the governing building code and other codes, ordinances, rules, regulations, orders and other legal requirements of public authorities which bear on performance of the work. Nothing in the Drawings or Specifications shall be construed to permit work not conforming to these applicable laws, ordinances, rules, and regulations. In case of conflicts between code requirements, the most restrictive shall apply; except that where the requirements of these Specifications exceed code requirements, the Specifications shall govern.
- D. Attend pre-scheduled on-site job conference meetings and/or any special meetings as may be required by the Owner's Representative.
- E. Promptly submit written notice to the Owner's Representative of any observed variance in Contract Documents from legal requirements. Appropriate modifications to Contract Documents will be performed by the Owner's Representative to incorporate such necessary modifications.
1. Contractor shall assume responsibility for work performed and known to be contrary to such requirements.
- F. Enforce strict discipline and good order among the contractor's or sub-contractor's employees per the discretion of the Owner's Representative.
- G. The Contractor shall be held to have examined the site and to have compared it with the Drawings and Specifications, to have carefully examined all of the Contract Documents and to have satisfied itself as to the conditions under which the work is to be performed before entering in this Contract.
1. No allowance shall subsequently be made on behalf of the Contractor on account of an error on its part or its negligence or failure to acquaint itself with the conditions of the site.

- H. Examine site and verify that site conditions are acceptable to begin any work. Verify that work specified elsewhere has been completed to an appropriate stage to begin any applicable work. This includes, but is not limited to, lines, grades and surfaces prepared by others. Notify the Owner's Representative in writing of any irregularities or unacceptable conditions. Start of work by Contractor shall indicate Contractor's acceptance of site conditions.
- I. Throughout the job the Contractor shall be responsible for the general safety of the public and shall take appropriate means at no extra cost to Owner to provide a safe and secure job site to the satisfaction of the Owner's Representative.
- J. Verify all measurements, materials and systems taken from the Drawings and Specifications. Contractor shall be responsible for all investigations, field measurements layouts, and coordination necessary to properly fit, install and complete the work required, including integration of new work into, and with existing.
- K. Contractor shall deliver, receive, store, protect, install and apply materials in accordance with manufacturer's and/or industry specifications and instructions unless specifically modified and shown otherwise in the Contract Documents. Installations shall be tight, smooth, level, straight, true to line, and secure.

1.06 PROTECTION OF PROPERTY, MATERIALS AND WORK

- A. Contractor shall be held responsible insofar as its operations are concerned for the care, protection, and preservation of the adjoining premises, buildings, trees, landscaping, utilities, walks, streets, and adjacent properties from damage resulting from or incidental to this Contract.
- B. Protect existing structures, planted areas and improvements not designated for removal. Damage to existing structures including asphalt paving, utilities, and fixtures shall be replaced to an "as was" or better condition, at Contractor's expense, to the satisfaction of the Owner's Representative.
- C. Materials and equipment, both before and after installation, shall be properly protected by the contractor from the weather and other hazards and kept in a clean and orderly manner.
- D. Utility piping and conduit stub-outs, and parts or equipment left unconnected shall be capped, plugged, or otherwise properly protected by the contractor to prevent damage or the intrusion of dirt or other foreign matter.
- E. Materials and equipment damaged or containing defects developed before acceptance of the work shall be replaced with new at the Contractor's expense.

1.07 WORK SEQUENCE AND SCHEDULE

- A. The sequence and scheduling of the work to be performed by the Contractor shall be subject to review and acceptance by the Owner's Representative. The Contractor shall submit a Submittal Progress Log and Schedule in accordance with Section 01 33 00 - Submittal Procedures prior to starting work. Project schedules shall conform to Specification Section 01 33 00.

1.08 CONTRACTOR'S USE OF PREMISES

- A. Confine operations to areas immediately within the proposed project sites.
 - 1. Develop and utilize construction access and haul routes as per the rules and regulations pertaining to the locale in which the work is to be performed and in accordance with the discretion of the Owner's Representative.
 - 2. Do not encumber site with materials or equipment.
- B. Limit use of premises for work and construction operations to allow for work by other contractors.

1. Conduct operations so as not to cause unnecessary delay or hindrance to other contractors.
 2. Conduct, adjust, correct, and coordinate work with others to prevent project discrepancies and/or delays.
- C. Assume full responsibility for protection and safekeeping of products stored on premises and work performed until Final Acceptance of the work.
- D. Move stored products under Contractor's control which interfere with operations of the Owner.
- E. Obtain and pay for use of additional storage or work areas needed for construction operations.

1.09 WORK HOURS AND WORK DURING ONGOING ACTIVITIES

- A. Carry on the work as quietly as possible to prevent possible annoyance to adjacent properties. Avoid unnecessary noise at all times. Comply with local noise regulations or requirements. No work, delivery of equipment or materials shall take place between the hours of 7:00 PM and 7:00 AM, or during non-working hours and days without written authorization by the Owner's Representative.
- B. When connecting new utilities to existing, and similar operations, the contractor shall time and coordinate with Owner's Representative, facility operators, and utility companies such operations to minimize interference with existing activities and operations.

1.10 MATERIALS

- A. Unless otherwise noted or scheduled, materials and equipment specified and used in the work of this Contract shall be new, in first class condition, and suited to the intended use.
- B. Materials shall be delivered to the site and stored in original containers sheltered from the elements, but readily accessible for inspection by the Owner's Representative until installed.
- C. Materials of the same general type shall be of the same make and quality throughout the work to provide uniform appearance, operation, and maintenance ease.
- D. Equipment specified by manufacturer's number shall include all controls and accessories listed in catalog as standard equipment. Furnish optional or additional accessories as specified.
- E. Where no specified make of material or equipment is specified, any product by a reputable manufacturer which conforms to the requirements of the Contract Documents may be used with the Owner's Representative's acceptance.
- F. Materials and equipment shall be current products by manufacturers regularly engaged in the production of such products.
- G. Equipment items shall be supported by service organizations, which are reasonably convenient to the equipment installation in order to render satisfactory service to the equipment on a regular and emergency basis during the Specified Warranty Period.

1.11 NUISANCE WATER

- A. The Contractor shall protect the work at all times from damage, and shall take measures to prevent delays in the progress of the work caused by nuisance water, such as rainfall, irrigation water and groundwater.
- B. The Contractor shall dispose of nuisance water using appropriate mechanical means at their sole expense and without adverse effects upon the Owner's, or any other property.

- C. The Contractor shall comply with any and all applicable non-point source pollution regulations required by the Owner.

1.12 REFERENCE POINTS

- A. The Contractor shall leave existing stakes and reference points in their existing locations unless directed or authorized otherwise by the Owner's Representative. The Contractor shall set additional stakes and reference points as necessary to properly establish horizontal and vertical controls required for the work.

1.13 COORDINATION

- A. The Contractor shall coordinate all items of its work to assure efficient and orderly sequence of installation of construction elements.
 - 1. The Contractor shall make provisions for accommodating items installed by the Owner or under separate contracts.
 - 2. The Contractor shall coordinate and cooperate fully with all other agencies, sub-contractors, or utility company personnel furnishing labor, materials, or services, so that the work, as a whole, shall be executed in the most efficient manner and without conflict or delay.
- B. The Contractor shall verify that characteristics of interrelated operating equipment are compatible and coordinate work having interdependent responsibilities for installing of mechanical, irrigation, or electrical work, which may be indicated diagrammatically on Drawings.
- C. The Contractor shall coordinate space requirements and installation of work, which is indicated diagrammatically on Drawings.
 - 1. Follow routing shown for pipes and conduits as closely as possible, run lines parallel with lines of construction edges whenever possible.
 - 2. Utilize spaces efficiently for other installations, for maintenance, and for repairs.
 - 3. Work out all conditions involving work of all trades in advance of installation. If necessary, and before work proceeds in areas with constricted clearances, prepare supplementary drawings for Owner's Representative review, showing all work in "tight" areas. Provide supplementary drawings and additional work necessary to overcome spatially constricted conditions.
- D. Differences or disputes concerning coordination, interference or extent of work between divisions shall be decided by the Owner's Representative.
- E. Access Doors and Panels: Coordinate access door and panel requirements with each trade installing work to which access must be available to the Owner's Representative from time to time.

1.14 CUTTING AND PATCHING

- A. Contractor shall be responsible for all cutting, fitting, or patching of work which may be required to make its several parts come together properly and fix it to receive or be received by work of other trades.
- B. Costs incurred by defective or poorly timed work shall be borne by the responsible party, as determined by the Owner's Representative. Contractor shall not endanger any work, persons or construction by cutting, digging, or otherwise, and shall not alter the work of any other contractor except as acceptable to the Owner's Representative.
- C. Patching of openings for new installations and openings resulting from the removal or relocation of an installation shall be done with material of the same type adjoining openings and as acceptable to the Owner's Representative.

1.15 CLEANING DURING CONSTRUCTION

- A. Execute weekly cleaning operations to keep the work, site, streets, and adjacent properties free from accumulations of waste materials, rubbish, and windblown debris resulting from construction operations.
- B. Provide on-site containers for the collection of waste materials, debris and rubbish.
- C. Remove hazardous waste materials, debris, and rubbish from the site periodically and properly dispose of such materials at legal disposal areas.
 - 1. Location of legal disposal sites and all costs incurred from waste disposal and transportation shall be the responsibility of the contractor.
 - 2. Waste material or debris shall not be buried or burned on the site.
- D. The Owner's Representative may, at any time during construction, order general clean-up of the site at no additional cost to the Owner.

1.16 PROJECT COMPLETION

- A. Conform to Section 01 77 00 - Contract Closeout.
- B. The Contractor shall, at completion of the project, leave the installed work properly operating and in a thoroughly clean condition.
- C. Thoroughly instruct the Owner's Representative and any applicable operation and maintenance personnel in the contents of the "operations and maintenance manual." Refer to Section 01 33 00 – Submittal Procedures.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

1.01 SUMMARY

- A. Section Includes: Specific requirements for submission and approval of products other than those specified or noted on the Drawings.
- B. Related Requirements:
 - 1. Section 01 33 00 – Submittal Procedures
 - 2. Other applicable Sections of the Specifications

1.02 DEFINITIONS

- A. Substitutions - General: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
- B. Substitutions for Cause: Changes proposed by Contractor that are required due to changed project conditions, such as unavailability of product, regulatory changes, or unavailability of required warranty terms.
- C. Substitutions for Convenience: Changes proposed by Contractor or Owner that are not required in order to meet other Project requirements but may offer advantage to Contractor or Owner.

1.03 INTENT OF SPECIFICATIONS – PRODUCT SELECTION

- A. When a material, article, or process is indicated or specified by trade, patent, proprietary name, or name of manufacturer, the Specification shall be deemed to be followed by the words "or equal, as accepted in writing by the Owner's Representative" and a request for substitution shall be submitted as specified in this Section. Provide only the named product or products where products are specified followed by the words "no substitution." Substitutions are not allowed.
- B. The naming of more than one manufacturer in a Section does not imply that all products produced by the listed manufacturers are acceptable for use on the project. Where more than one proprietary name, process, and product is specified, the Contractor may provide materials or equipment of any one of the manufacturers specified if it is in full compliance with the Contract Documents and is acceptable to the Owner's Representative.
- C. Costs incurred due to requests, changes or revisions resulting from substitutions requiring Drawings or services of the Owner's Representative or Project Consultants to facilitate purchase, installation or erection of any portion of the work shall be borne by the Contractor. A flat hourly rate, as agreed upon, shall be paid by the Contractor whether the change is accepted or not. This fee shall be deducted, and paid, from Contract moneys due to the Contractor as determined by the Owner's Representative.

1.04 ACTION SUBMITTALS

- A. Procedures: In accordance with Section 01 33 00 – Submittal Procedures.
- B. Substitution Requests:
 - 1. Include sufficient data, drawings, samples, literature and other detailed information which demonstrates to the Owner's Representative that the proposed substitute is equal in quality, operating efficiency, and durability of the material specified.
 - 2. Substitution Request Form: Facsimile of form provided in Project Manual.

3. Documentation:
 - a. Submit a detailed side-by-side comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable Specification Section. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified.
 - b. Sufficient data, drawings, samples, literature and other detailed information which demonstrates to the Owner's Representative that the proposed substitute is equal in quality, operating efficiency, and durability of the material specified.
 - c. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable or requested.
 - d. Samples for review, if applicable.
 - e. Certificates and qualification data.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Cost information, including a proposal of change, if any, in the Contract Sum.
 - i. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.
 - j. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

C. Submittal Timing:

1. Prior to Bidding:
 - a. A request for substitutions will be considered if received within **10 calendar days** from the bid opening date.
 - b. Approval of substitutions shall be accepted or denied by the City at least **3 calendar days** before bid opening.
 - c. If a decision on use of a substitute cannot be made within these time limits, the product specified shall be used.
2. Following Award of Contract:
 - a. Substitutions for Cause: Submit requests immediately on discovery of need for change, but not later than **15 working days** prior to time required for preparation and review of related submittals.
 - b. Substitutions for Convenience: Submit within **10 days** after Notice to Proceed. Requests received after that time may be considered or rejected at discretion of Architect.

1.05 CONSIDERATION OF SUBSTITUTIONS

A. General:

1. Materials and equipment for the work shall be the standard product of a manufacturer regularly engaged in the production of such materials and equipment. Product options or substitutions shall not be the basis for any price increase above the original Contract Sum.
2. Substitutions which are equal in quality, efficiency, durability and utility to those specified will be permitted, subject to the following conditions.
3. The Owner's representative shall review such proposed substitutions and determine if a substitution is acceptable. If the following conditions are not satisfied, Owner's Representative will return requests without action, except to record noncompliance with these requirements.
4. Failure of the Contractor to submit proposed substitutions for review in the manner specified shall be sufficient cause for rejection by the Owner's Representative of any substitutions otherwise proposed.
5. Failure to place orders for specified equipment or material sufficiently in advance of the scheduled date of installation shall not be considered a valid reason upon which the Contractor may base a request for any substitutions or for any deviations from the Contract Documents.

- B. Substitutions for Cause: Owner's Representative will consider Contractor's request for substitution for cause when the following conditions are satisfied. If the following conditions are not satisfied, Owner's Representative will return requests without action, except to record noncompliance with these requirements:
1. Substitution request is fully documented and properly submitted.
 2. Requested substitution will not adversely affect the Project Construction Schedule.
 3. Requested substitution has received necessary approvals of authorities having jurisdiction, if applicable.
 4. Requested substitution provides specified warranty.
 5. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
- C. Substitutions for Convenience: Owner's Representative will consider Contractor's request for substitution for convenience when, in addition to the conditions specified for a substitution for cause, under the following conditions.
1. Requested substitution offers Owner a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume. Owner's additional responsibilities may include compensation for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
- D. Action by Owner's Representative:
1. Substitutions shall be favorably reviewed and accepted by the Owner's representative in writing prior to implementation. Favorable review shall not relieve the Contractor from complying with the requirements of the Contract Documents, and the Contractor shall be responsible for all expenses for any changes resulting from acceptable substitutions which affect other parts of the work.
 2. If necessary, Owner's Representative will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution.
 3. Owner's Representative will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.
 4. Forms of Acceptance: Change Order, Construction Change Directive, or Supplemental Instructions for minor changes in the Work.
- E. The first or only named manufacturer is the basis for the project design and the use of alternative-names, second-names, or unnamed manufacturer's products may require modifications in the project design and construction.
1. Costs incurred due to requests, changes or revisions resulting from substitutions requiring drawings or services of the Owner's representative or project consultants to facilitate purchase, installation or erection of any portion of the work, shall be borne by the contractor. A flat hourly rate, as agreed upon, shall be paid by the contractor whether the change is accepted or not. This fee shall be deducted, and paid, from Contract moneys due to the contractor as determined by the Owner's representative.
- F. Contractor shall furnish full information concerning the material or articles being proposed for substitution.
1. Testing of a proposed substitute material to assure compliance with the Specifications may be required by the Owner's representative at the contractor's expense.
 2. Samples shall be submitted for review as specified in Section 01 33 00 – Submittal Procedures.
 3. Equipment, material, and articles installed or used by the contractor without required review, shall be at the contractor's risk.
- G. Substitutions shall comply with or exceed all requirements of size, function, structure, durability, and appearance without exception.

1. Use of accepted substitutions shall in no way relieve the contractor from responsibility for compliance with the Contract Documents after installation.
2. The contractor shall assume all extra costs caused by the use of such substitutions where they affect other work or trades.

1.06 SUBSTITUTION REQUEST FORM

- A. For proposed substitutions, the Contractor shall complete the following Substitution Request Form, attach substantiating back-up literature, and submit to the Owner's representative within time limit specified.

(Remainder of this Page is Blank)

SUBSTITUTION REQUEST FORM

DATE: _____

TO: OWNER'S REPRESENTATIVE

PROJECT NAME: _____

SPECIFIED ITEM: Section _____ Page _____ Item Number _____ Paragraph _____

DESCRIPTION:

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION: (put N/A where not appropriate)

Manufacturer: _____ Color: _____

Model Number: _____ Material: _____

Attached data includes product description, specifications, drawings, photographs, performance and test data adequate for evaluation of the requests; applicable portions of the data are clearly identified.

Attached data also includes description of changes to Contract Documents which the proposed substitution requires for proper installation.

The undersigned states that the following paragraphs, unless modified on attachments, are correct:

1. The proposed substitution does not affect dimensions shown on Drawings. If, in fact, it does affect dimensions, the contractor shall provide shop drawings, accurately showing changes to documents.
2. The undersigned shall pay for changes to the design, including engineering design, detailing, and construction costs caused by the requested substitution.

- 3. The proposed substitution shall not adversely affect other trades, the construction schedule, or specified warranty requirements.
- 4. Maintenance and service parts are locally available for the proposed substitution.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Submitted by:

Signature: _____ Title: _____

License Category: _____ License Number: _____

Firm: _____ Phone No.: _____

Address: _____ Fax No.: _____

Telephone: _____

OWNER'S REPRESENTATIVES REVIEW:

NO EXCEPTIONS TAKEN EXCEPTIONS TAKEN (SEE ATTACHED COMMENTS)

FURNISH AS CORRECTED REVISE AND RESUBMIT

By: _____

Date: _____

Comments:

Attachments:

END OF SECTION

SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Procedures to be followed in preparing and submitting the following supplementing and superseding those included in the General Conditions.
 - a. Construction Schedule.
 - b. Submittal Schedule.
 - c. Project directory.
 - d. Product list.
 - e. Shop drawings.
 - f. Product data.
 - g. Samples.
 - h. Procedures for:
 - 1) Action Submittals.
 - 2) Informational submittals.
 - i. Colors and patterns submittals.
 - j. Operating and maintenance manuals.
 - k. Field samples and mockups, including on-site review of materials, colors, and textures.
 - l. Requests for Information (RFI's).
 - 2. Final distribution of submittals.
- B. Related Requirements:
 - 1. Section 01 25 00 - Substitution Procedures.

1.02 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Owner's Representative's responsive action. Action submittals are those submittals indicated in individual Specification Sections as action submittals.
- B. Informational Submittals: Written and graphic information and physical samples indicated in individual Specification Sections as informational submittals that do not require Owner's Representative's responsive action.
- C. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.03 GENERAL

- A. Comply with the requirements specified in addition to submittal review procedures and requirements of the General Conditions.
- B. Do not commence any portion of the Work requiring submission of a shop drawing, product datum, or sample until the submittal has been reviewed by Owner's Representative and appropriate consultant. Such portions of the Work shall be in accordance with reviewed submittals.
- C. Shop drawings, product data, and samples are in no case to be considered Contract Documents but are to be treated only as instruments of convenience and facility to further the progress of the Work.

- D. Shop drawings, product data, samples and supporting data shall be prepared by Contractor or its suppliers but shall be submitted to Owner's Representative by Contractor as the instruments of the Contractor.
 - 1. Contractor shall check the drawings of its suppliers as well as its own drawings before submitting them to Owner's Representative.
 - 2. Contractor shall ascertain that shop drawings, product data, and samples meet all requirements of the Contract Documents and also conform to the structural and space conditions. If shop drawings, product data, and samples show variations from Contract Documents, whether because of standard shop practice or other reasons, Contractor shall make special mention thereof in its letter of transmittal and describe the reasons why there are variations.
 - 3. Contractor shall be fully responsible for observing the need for and making changes in arrangement and manner of installation of piping, connections, wiring, and similar items that may be required by equipment it proposes to supply, both as pertains to its own work and work affected under other parts, headings, or Divisions of the Contract Documents.
 - 4. Prior to submittal to Owner's Representative, each shop drawing, product datum, and sample submitted for review shall be stamped, dated, and signed by Contractor, verifying that it has been checked by Contractor to be in accordance with the Contract Documents. Submittals not signed by Contractor will be returned without review by the Owner's Representative.

- E. Miscellaneous systems not specifically specified but installed to meet code requirements or for other reasons are subject to Owner's Representative's review prior to installation.

1.04 COORDINATION OF SUBMITTALS

- A. Prior to submittal, use all means necessary to fully coordinate all material, including, but not necessarily limited to:
 - 1. Determine and verify all interface conditions, catalog numbers and other data.
 - 2. Coordinate with other trades as required.
 - 3. Clearly indicate all deviations from requirements of the Contract Documents.
 - 4. Verify that each item and the submittal conform in all respects with the requirements of the Contract Documents.

- B. The following products do not require further review except for interface within the Work, unless indicated otherwise:
 - 1. Products specified by reference to standard specifications such as ASTM and similar standards.
 - 2. Products specified by manufacturer's name and catalog model number.

- C. By affixing the Contractor's signature to each submittal, the Contractor certifies that this coordination has been performed.

1.05 GROUPING OF SUBMITTALS

- A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.
 - 1. Partial submittals may be rejected as not complying with the provisions of the Contract.
 - 2. The Contractor may be held liable for delays so occasioned.

1.06 IDENTIFICATION OF SUBMITTALS

- A. Consecutively number all submittals.
 - 1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.
 - 2. On resubmittals, reference the original submittal number.

- B. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.

- C. On at least the first page of each copy of each submittal, and elsewhere as required for positive identification, clearly show the submittal number in which the item was included.
- D. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times. Make the submittal log available to the Owner's Representative for review.
- E. Quality Control Set: Maintain returned final set of submittals at project site, in suitable condition and available for quality control comparisons by Owner's Representative.

1.07 TIMING OF SUBMITTALS

- A. Make submittals far enough in advance of scheduled dates for installation to provide all time required for reviews, necessary approvals, possible revisions, resubmittals, and for placing orders and securing delivery.
- B. In scheduling, allow for review by the Owner's Representative in a timely manner following receipt of the submittal by the Owner's Representative.
- C. Delays caused by tardiness in receipt of submittals will not be an acceptable basis for extension of the Contract completion date.

1.08 SUBSTITUTIONS

- A. Substitution requests shall be written, timely and submitted in accordance with the procedures specified in Section 01 25 00 - Substitution Procedures.

PART 2 - SUBMITTALS

2.01 PROJECT DIRECTORY

- A. After execution of the Contract but prior to commencement of Work, Contractor shall submit to Owner's Representative a Project Directory listing subcontractors and vendors on the Project and giving a brief description of their scope of work, firm name, contact person, address, phone number, and fax number.

2.02 SUBMITTAL SCHEDULE

- A. Contractor shall prepare and submit to Owner's Representative a "Submittal Schedule" when required by the General Conditions showing scheduled dates of submittals and date required for return of submittals to Contractor.
- B. Contractor shall provide in schedule a minimum of 10 working days for Owner's Representative to review and check submittals as may be necessary provided it is not a deferred approval item. Based on the number and complexity of submittals at any one time, Owner's Representative's review period may be longer than 10 days.
- C. Dates on "Submittal Schedule" shall be agreed upon by both Owner's Representative and Contractor.

2.03 PRECONSTRUCTION PHOTOGRAPHS

- A. Before commencement of work on the site, take digital photographs of Project site and surrounding properties, including existing items to remain during construction, from different vantage points, as directed by the Owner's Representative.

- B. Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as cracking or other damage caused by demolition, site preparation, and building construction operations.
- C. Submit digital file as specified for Construction Photographs.
- D. Submit before Work begins.

2.04 CONSTRUCTION SCHEDULE

- A. In accordance with the General Conditions, prepare a comprehensive schedule of basic operations of the entire Project in the form of a Critical Path (CPM) network or other appropriate method acceptable to Owner's Representative.
 - 1. Indicate critical dates for submission of specified shop drawings, product data, samples, and certificates. Provide in Schedule a minimum of 10 working days for Owner's Representative to review and check submittals as may be necessary. No extension of time will be granted because of Contractor's failure to make submittals to allow for review and processing by Owner's Representative in accordance with the accepted milestones. Specific submittals considered by the Contractor to be on the "critical path" shall be indicated on the Schedule.
 - 2. Include decision dates for products specified by allowance and for selection of colors/finishes.
- B. The schedule shall be the basis for establishing starting and completing dates of Work for the Project.
- C. Conform to accepted schedule, and arrange work in such a manner that it will be installed in accordance with the schedule.
- D. Establish a program to reevaluate and update the schedule periodically in accordance with requirements of the Project. Submit first schedule 2 weeks after Notice to Proceed.
- E. Coordinate letting of subcontracts, material purchases, delivery of materials, sequence of operations, and similar activities to conform to accepted schedule, and furnish proof of conformance as may be required by Owner.
- F. In case Owner determines, after consultation with Owner's Representative, that Contractor fails or refuses to take appropriate and necessary measures to complete the Work in accordance with the accepted schedule or within time to which such completion may be extended, the Contract, or any part thereof, may be terminated under the provisions of the General Conditions.
- G. Submit to the Owner's Representative for review, within 45 calendar days after date of the Contract or as allowed by the Schedule, all submittals for equipment, fabrications, and specialty items as listed in each Section of the Specifications.

2.05 SHOP DRAWINGS

- A. Shop drawings shall be drawn to a scale, be completely dimensioned, and be sufficiently large to show all pertinent aspects of the item and its method of connection to the Work, or as specifically indicated elsewhere in other Sections of these Specifications.
- B. Entitle shop drawings with name of the Project and list applicable divisions, sections, article, or reference on each sheet.
- C. Submit separate items on separate sheets.
- D. The reproduction of any Contract Documents for use in a shop drawing submittal is not permitted.

1. If the Contractor requires, it may request drawings/backgrounds from the Owner's Representative to use in its preparation of shop drawings. The Owner's Representative will send drawings, via e-mail, only after the following is completed:
 - a. Contractor to complete a "CAD Release & Indemnity Agreement," or similarly named document, to be provided by Owner's Representative. Sign and return to the Owner's Representative.
 - b. Requests for drawings prepared by consultant of Owner's Representative shall be directed to the office of the respective consultant and are subject to each consultant's firm policies.
2. Review comments of the Owner's Representative or its consultants will be shown on the copy returned to the Contractor. The Contractor shall make and distribute additional copies as are required for its purposes.
3. The Owner shall be provided with a copy of shop drawing transmittals only if requested.

2.06 PRODUCT DATA

- A. Manufacturer's standard drawings shall be modified to delete information which is not applicable and shall be supplemented to provide additional information where so required.
- B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data shall:
 1. Have each copy clearly marked to identify pertinent materials, products, models, finishes, etc.
 2. Show clearly standard options included.
 3. Show dimensions and clearances required.
 4. Show performance characteristics and capacities.
 5. Show wiring diagrams and controls, and show necessary rough-in requirements for utility services and connections, where applicable.
 6. Include manufacturer's installation instructions on 8.5-inch by 11-inch format.
- C. Identify each item of product data by reference to sheet and detail numbers of Contract Drawings and/or specific reference to Articles or paragraphs of a Specification Section.
- D. Where product data, as submitted, contains extraneous information, unmarked options, or is incomplete, it will be returned to Contractor without review.

2.07 SAMPLES

- A. Contractor shall forward to Owner's Representative, at its own expense, samples designated for use on the Project. Include material, equipment, textures, colors, and fabrics in sizes and quantities as required by the Drawings and Specifications or as requested by Owner's Representative. Where there is an expected range of color or texture variations for the specified item, submit sufficient number of samples to illustrate range.
- B. Submit and resubmit samples until accepted by Owner's Representative.
- C. No review of a sample shall be taken in itself to change or modify the Contract requirement.
- D. Finishes, materials, and workmanship in the completed Project shall match accepted samples.
- E. Samples of value will be returned to Contractor, when requested in writing at time of submittal, for its use in the Project after review, analysis, comparison, or testing as may be required by Owner's Representative.
- F. No samples shall be incorporated into the Work, unless otherwise specified or specific approval is given by Owner's Representative.

2.08 FIELD SAMPLES AND MOCKUPS

- A. Comply with requirements specified in respective Specification Section.

2.09 REQUESTS FOR INFORMATION (RFI'S)

- A. RFIs shall be submitted by the Contractor or by subcontractors to the Contractor who shall then assign the request an RFI number and forward the request on to the Owner's Representative. RFIs from contractors under separate contract with Owner, and performing work concurrently with work under this Contract, shall submit RFIs through the Contractor for coordination.
- B. Subcontractors shall not submit RFIs directly to the Owner's Representative.
- C. Each RFI shall be given a discrete, consecutive number such as "001," "002," "003," etc. Revisions or resubmittal of the same RFI shall maintain the original RFI number but be otherwise identified with a suffix such as "001A" for first revisions, "001B" for second revision, etc.
- D. Contractor shall identify in the RFI the specific issue that the Contractor is requesting information on, where the issue is referred to in the Contract Documents, and what is the Contractor's proposed solution to the apparent conflict. RFIs not addressing these three issues will be rejected.
- E. The Owner's Representative's response to RFIs will confirm a stated interpretation or otherwise interpret the design intent and may include furnishing an alternative conflict resolution.
- F. The Owner's Representative will review and process RFIs in an average of 10 working days. It is acknowledged and understood that some RFIs will take longer to answer than others.
- G. RFI Log: Contractor shall prepare and maintain a log of RFIs, and at any time requested by the Owner's Representative, the Contractor shall furnish copies of the log showing all outstanding RFIs.

PART 3 - EXECUTION

3.01 PROCEDURES FOR ACTION SUBMITTALS

- A. General: Submit as specified in the General Conditions and Specification Sections.
 - 1. Submittals shall be made to Owner's Representative. Submittal of shop drawings via e-mail attachment will be generally accepted, though when requested by Owner's Representative, Contractor shall provide full size and half size shop drawings.
 - 2. Subcontractors shall make submittals to Contractor.
 - 3. Submittals shall not be made directly to the Owner, unless specifically requested, or consultants of the Owner's Representative. Even if a submittal is reviewed and returned by a consultant of the Owner's Representative, such submittal shall be considered as not reviewed if not submitted through the Owner's Representative.
 - 4. If more than one resubmittal of the same item or its component is required, the Contractor will be billed for additional review time and materials at current billing rates of the Owner's Representative.
- B. Unless otherwise agreed or requested, Owner shall be provided with a copy of transmittals only.
- C. Copies required in each Action Submittal shall be as follows unless otherwise mutually agreed or specified in a respective Specification Section:
 - 1. Shop Drawings and Product Data: Digital PDF (Portable Document Format) files via email, ftp site, or other secure file transfer protocol.
 - a. Digital submittals shall be fully compatible with Adobe Acrobat Reader.

- b. All parties shall view and print with Adobe Acrobat (fully up-to-date) to ensure compatibility, unless agreed upon otherwise.
 2. Samples:
 - a. Unless otherwise specified, submit samples in the quantity which is required to be returned, plus 2 which will be retained by the Owner's Representative.
 - b. By prearrangement in specific cases, a single sample may be submitted for review and, when reviewed, be installed in the Work at a location agreed upon by the Owner's Representative.
- D. Identification:
 1. Properly identify each submittal with name of Project, Contractor, subcontractor, and date.
 2. Accompany each submittal by an acceptable transmittal form referring to Project name and Specifications Section number, and paragraph number, when applicable, for identification of each item.
 3. Consecutively number shop drawings for each Section of work; retain numbering system throughout all revisions.
 4. Allow clear space on each drawing, product datum, and sample for stamp of Contractor and Owner's Representative. Where clear space is not available on samples, submit with tags or stickers attached.
- E. Stamp each shop drawing, product datum, and sample to certify that it has been coordinated and checked for completeness and compliance with requirements of the Work, Project, and Contract Documents.
- F. Review by Owner's Representative:
 1. General:
 - a. Except for finish, color, and other aesthetic matters left to Owner's Representative's decision by Contract Documents, Owner's Representative's review of shop drawings, product data, and samples is only for Contractor's convenience in following work and does not relieve Contractor from responsibility for deviations from requirements of Contract Documents.
 - b. Do not construe review by Owner's Representative as a complete check or relief from responsibility for errors or omissions of any sort in shop drawings or schedules or from necessity of furnishing work required by Contract Documents that may not have been shown on shop drawings.
 - c. Review of a separate item by Owner's Representative does not indicate review of complete assembly in which it functions.
 - d. Review comments of the Owner's Representative (or its consultants) will be shown when it is returned to the Contractor. The Contractor shall make and distribute such copies as are required for its purposes.
 2. Submittals not stamped by Contractor and submittals which, in opinion of the Owner's Representative, are incomplete, contain numerous errors, or have not been checked or have only been checked superficially will be returned to Contractor for resubmittal.
 3. Processing:
 - a. Owner's Representative will review shop drawings, product data, and samples in accordance with agreed upon "Submittal Schedule" and will return them to Contractor imprinted with stamp of the Owner's Representative.
 - b. Notations by Owner's Representative which increase Contract cost or time of completion shall be brought to attention of the Owner's Representative before proceeding with work. Failure to do so will result in the increased costs being borne by the Contractor.
 - c. Each submittal will be stamped indicating appropriate action required of the Contractor.
 - d. If for any reason the Contractor cannot comply with the notations, Contractor shall re-submit submittal. In the transmittal letter accompanying the re-submittal, clearly describe the reason(s) for not being able to comply with the notations.
- G. Consultants' Review:
 1. Submittals requiring review by Owner's Representative or its consultants shall be sent to the Owner's Representative. Owner's Representative will forward submittal to applicable consultant for their review.

2. Processing shall be in accordance with consultants stamp.
3. If action required by consultants stamp is not clear, Contractor shall immediately notify the Owner's Representative for a clarification.
4. If returned submittal also includes stamp by the Owner's Representative, processing shall be in accordance with the Owner's Representative's stamp.

H. Revisions:

1. Make revisions pertinent to by comments noted on the submittal.
2. If the Contractor considers any required revision to be a change, they shall so notify the Owner's Representative as provided for in the General Conditions.
3. Show each revision by number, date, and subject in a revision block on the submittal.
4. If for any reason Contractor cannot comply with the notations, Contractor shall resubmit submittal.

- I. Revisions after Review: When a submittal has been reviewed by the Owner's Representative, resubmittal for substitution of materials or equipment will not be considered unless accompanied by an acceptable explanation as to why the substitution is necessary, or unless directed by the Owner.

3.02 PROCEDURES FOR INFORMATIONAL SUBMITTALS

A. General:

1. Prepare and submit "Informational Submittals" where required by the Specifications.
2. Number of Copies: Submit PDF as specified for Action Submittals unless otherwise indicated. Owner's Representative will not return copies.
3. Certificates and Certifications: Provide a notarized statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
4. Test and Inspection Reports: Comply with requirements specified in Section 01 45 00 – Quality Control.

B. The following items shall be considered "Informational Submittals" whether or not identified as such in the respective Specification Sections.

1. Qualification Data.
2. Certificates for or from the following:
 - a. Installers.
 - b. Manufacturers.
 - c. Products and materials.
3. The following Reports:
 - a. Material and Product Test Reports.
 - b. ICC-ES Reports:
 - c. Preconstruction Test Reports.
 - d. Compatibility Test Reports.
 - e. Field Test Reports.
4. Maintenance Data.
5. Design Data.
6. Manufacturer's Instructions.
7. Manufacturer's Field Reports.
8. Insurance Certificates and Bond.
9. Construction photographs as specified .
10. Material Safety Data Sheets (MSDSs).

3.03 PROCEDURES FOR CLOSEOUT AND MAINTENANCE MATERIAL SUBMITTALS

- A. Number of Copies: Two, unless otherwise directed by Owner's Representative.
- B. Comply with additional Closeout Procedures specified for the Project.

3.04 FINAL DISTRIBUTION AFTER REVIEW

- A. In addition to copies of submittals required by Contractor, subcontractors, suppliers, and fabricators, Contractor shall make distribution to:
1. Contractor's jobsite file.
 2. Project Record Documents file; see additional requirements specified in Section 01 78 39 - Project Record Documents.

END OF SECTION

SECTION 01 41 00

REGULATORY REQUIREMENTS

1.01 SUMMARY

- A. Section Includes:
 - 1. The codes and regulations applicable to the Work.
 - 2. Code and regulatory abbreviations used in the Specifications.
- B. Related Requirements:
 - 1. Section 01 42 00 - References, Abbreviations, and Definitions; requirements relating to industry standard references used in the Specification Sections.

1.02 APPLICABLE CODES AND REGULATIONS

- A. Codes which apply to this Project include, but are not limited to, the following including additions, changes, and interpretations adopted by the enforcing agency in effect as of the date of these Contract Documents.
 - 1. State of California Code of Regulations (CCR):
 - a. Title 8, Industrial Relations.
 - b. Title 19, Public Safety.
 - c. Title 24, Building Standards Code.
 - 1) Part 2, California Building Code.
 - 2) Part 3, California Electric Code.
 - 3) Part 4, California Mechanical Code.
 - 4) Part 5, California Plumbing Code.
 - 5) Part 6, California Energy Code.
 - 6) Part 9, California Fire Code.
 - 2. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."
 - a. Control of Work: Conform to Section 5.
 - b. Control of Materials: Conform to Section 6.
 - 3. The following additional Codes and Standards:
 - a. California Occupational Safety and Health Act Standards (Cal-OSHA).
 - b. Occupational Safety and Health Act (OSHA).
 - c. Air Quality Standards of the Bay Area Air Quality Management District of the California Air Resources Board including emissions and dust during construction.
 - d. Americans with Disabilities Act (ADA) Standards.
 - e. Environmental Regulations including:
 - 1) 22 CCR, Section 66260 et seq.; California Hazardous Waste Management Regulations.
 - 2) 40 CFR, Part 260 et seq.; Hazardous Waste Management System.
 - 3) 42 USC, Section 6901 et seq.; Resource Conservation and Restoration Act (RCRA).
 - 4) National Pollutant Discharge Elimination System (NDPES).
 - f. National Fire Protection Association (NFPA): Standards 13, 24, 72, and 80.
 - g. National Electrical Code (NEC).
- B. All work shall meet or exceed the requirements of the above codes.
- C. References in the Specifications to "code" or to "building code," not otherwise identified, shall mean the foregoing specified codes, together with the additions, changes, amendments, and interpretations adopted by the enforcing agency and in effect on the date of these Contract Documents. Nothing on the Drawings or in the Specifications shall be interpreted as requiring or permitting work that is contrary to these rules, regulations, and codes.

- D. Where other regulatory requirements are referenced in these Specifications, the affected work shall meet or exceed the applicable requirements of such references.
- E. Regulatory requirements referred to shall have full force and effect as though printed in these Specifications.
- F. Where the Drawings or Specifications call for or describe materials, workmanship, or construction of a better quality, higher standard, or larger size than is required by said laws, codes, rules, and regulations, the provisions of the Drawings and Specifications shall take precedence over said laws, codes, rules, and regulations.

1.03 OTHER APPLICABLE LAWS AND REGULATIONS

- A. All applicable federal, state, and local laws, regulations of governing utility districts, regulations of the state fire marshal, federal, state and local environmental regulations, and the various other authorities having jurisdiction over the construction of the Project shall apply to the Contract throughout and they shall be deemed to be included in the Contract the same as though printed in these Specifications.
- B. Discrepancies between these codes, rules, and regulations and the Contract Documents shall be brought to the attention of the Owner's Representative for resolution.

END OF SECTION

SECTION 01 42 00

REFERENCES, ABBREVIATIONS, AND DEFINITIONS

1.01 SUMMARY

- A. Section Includes:
 - 1. Requirements for standard references used in the various Specification Sections.
 - 2. Standard reference abbreviations used in the Project Manual.
 - 3. Definitions of terms used in the Project Manual.
- B. Related Requirements:
 - 1. Section 01 41 00 - Regulatory Requirements

1.02 STANDARD SPECIFICATIONS

- A. The Contract Documents contain references to various standard specifications, codes, practices, and requirements for materials, work quality, installation, inspections, and tests published and issued by the organizations, societies, and associations. Such references are hereby made part of the Contract Documents to the extent required.
- B. When standard specifications are included by abbreviation and number only, it is assumed that the Contractor is familiar with and has ready access to the specified standards.
- C. When the effective date of a reference standard is not given, it shall be understood that the current edition or latest revision thereof and any amendments or supplements thereto in effect on the date of original issue of these Contract Documents, as indicated on the cover, shall govern the Work.
- D. Reference standards are not furnished with the Contract Documents, because the Contractor, subcontractors, manufacturers, suppliers, and the trades involved are assumed to be familiar with their requirements.
- E. Contractor shall obtain its own copies of required specified referenced publications.
- F. The specification or standard referred to shall have full force and effect as though printed in these Specifications.
- G. In addition to those standards specifically referenced in the Specifications, comply with the accepted industry standards and trade association recommendations for the respective portions of Work.
- H. In the case of difference between referenced standards and the Contract Documents, the most stringent requirements prevail.

1.03 STANDARD SPECIFICATION ABBREVIATIONS

- A. In addition to abbreviations indicated on the Drawings, references in the Project Manual to trade associations, technical societies, recognized authorities, and other institutions may include the following organizations, which are sometimes referred to by only the corresponding abbreviations. Not all abbreviations are listed, and not all listed abbreviations are used.
- B. Abbreviations:
 - 1. AA Aluminum Association
 - 2. AAADM American Association of Automatic Door Manufacturers
 - 3. AAMA American Architectural Manufacturer's Association.
 - 4. AASHTO American Association of State Highway and Transportation Officials
 - 5. ACI American Concrete Institute

6. AEIC Association of Edison Illuminating Companies
7. AIA American Institute of Architects
8. AIEEE American Institute of Electrical and Electronic Engineers
9. AISC American Institute of Steel Construction, Inc.
10. AFI Air Filter Institute
11. AJCHN American Joint Committee on Horticultural Nomenclature
12. AMCA Air Moving and Conditioning Association
13. ANSI American National Standards Institute
14. APA APA - The Engineered Wood Association
15. ARI American Refrigeration Institute
16. ASHRAE American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc.
17. ASLA American Society of Landscape Architects
18. ASME American Society of Mechanical Engineers
19. ASSE American Society of Sanitary Engineering
20. ASTM American Society for Testing and Materials
21. AWMAC Architectural Woodwork Manufacturers Association of Canada
22. AWPA American Wood Protection Association
23. AWI Architectural Woodwork Institute
24. AWS American Welding Society, Inc.
25. AWWA American Water Works Association
26. BHMA Builder's Hardware Manufacturers Association
27. CBC California Building Code
28. CRA California Redwood Association
29. CSI Construction Specifications Institute
30. CLFMI Chain Link Fence Manufacturers Institute
31. CRSI Concrete Reinforcing Steel Institute
32. CS Commercial Standard of National Bureau of Standards, U.S. Department of Commerce
33. DHI Door and Hardware Institute
34. FGMA Flat Glass Marketing Association
35. FM Factory Mutual
36. FS Federal Specification of General Services Administration
37. GA Gypsum Association
38. ICC-ES International Code Council Evaluation Service, Inc.
39. MIL Military Specification of U.S. Department of Defense
40. NAAMM National Association of Architectural Metal Manufacturers
41. NAAWS North American Architectural Woodwork Standards
42. NAFM National Association of Fan Manufacturers
43. NBS National Bureau of Standards
44. NEC National Electric Code
45. NEMA National Electrical Manufacturers' Association
46. NFC National Fire Code
47. NFPA National Fire Protection Association
48. NIST National Institute of Standards and Technology
49. NLMA National Lumber Manufacturers Association
50. NSF National Sanitation Foundations
51. PCI Precast Concrete Institute
52. PDI Plumbing and Drainage Institute
53. RIS Redwood Inspection Service [Grading Rules]
54. SDI Steel Deck Institute
55. SDI Steel Door Institute
56. SFFPA Southern Forest Products Association
57. SMACNA Sheet Metal and Air Conditioning Contractors' National Association, Inc.
58. State of California:
 - a. CalTrans Business and Transportation Agency, Department of Transportation
 - b. SFM Office of State Fire Marshal
 - c. DSA Division of State Architect.

59. SSPC	SSPC: The Society for Protective Coatings
60. TCNA	Tile Council of North America
61. UL	Underwriters' Laboratories, Inc.
62. WCLIB	West Coast Lumber Inspection Bureau
63. WDMA	Window and Door Manufacturers Association
64. WI	Woodwork Institute
65. WMMP	Wood Moulding & Millwork Producers Association
66. WRCLA	Western Red Cedar Lumber Association
67. WWPA	Western Wood Products Association.

1.04 DEFINITIONS

- A. Reference to Drawings: Where the words "shown", "indicated", "detailed", "noted", "scheduled". or words of similar import are used, it shall be understood that reference is made to the Drawings accompanying these Specifications, unless otherwise noted.
- B. Addendum: The word "Addendum" shall mean written and/or graphic modifications to the Contract documents provided to holders of the Contract Documents prior to the opening of bids. Addenda shall be issued by the Owners Representative.
- C. Alternates: The word "Alternates" shall be understood to mean alternate products, materials, equipment, systems, methods, units of work or elements of the construction, which may, at the Owners option and under the terms established by the Contract Documents, be added to, or deleted from the work.
- D. Approvals: The words "approved", "approval", "acceptable", "acceptance", shall mean acceptance by the Owners Representative is required.
- E. Contract Change Order: The words "Contract Change Order" shall mean a change order authorization to the Contractor, covering changes to the Contract found by the Owner Representative to be necessary for the proper completion or construction for the whole work required by the Contract, and establishing the basis of payment and/or time adjustments for the work affected by the changes, also sometimes referred to as a "Change Order."
- F. Contract Documents: The words "Contract Documents" shall mean the documents contained within the General Conditions, Special Provisions of the Contract, the Drawings, the Specifications, Change Orders, and other modifications issued by the Owners Representative prior to and after execution of the Contract and identified as a Contract Document.
- G. Directions: The words "directed," "designated," and "selected" shall mean the directions, designations, selection, of the Owners Representative, unless otherwise noted.
- H. Drawings: The word "Drawings" shall mean the official Project bid or construction plans, plan details, profiles, typical cross sections, working drawings, shop drawings, supplemental drawings, and/or reproductions thereof, accepted or issued by the Owners Representative, which show the locations, character, dimensions, and details of work to be performed. All such documents are to be considered as a part of the Drawings.
- I. Equals: The words "or equal," "equal to," "approved equal," "or approved equal," "accepted equal," and "equivalent," shall mean "equal to or acceptable in the opinion of the Owners Representative," unless stated otherwise.
- J. Language: Words and phrases requiring an action or performance, such as "perform," "provide," "install," "furnish," "connect," "test," "coordinate," and words and phrases of similar import, shall be understood to be preceded by the phrase "The Contractor shall" unless otherwise stated.

- K. **Modifications:** The word "modifications" shall mean a written amendment to the Contract signed by both parties to the Construction Contract, a Change Order, a written interpretation issued by the Owners Representative or a written order for a minor change in the work issued by the Owners Representative.
- L. **Notice To Proceed:** The words "Notice to Proceed" shall mean the written notice issued by the Owners Representative to the contractor fixing the date on which or within which dates the contractor shall start to perform the contractor's obligations under the Contract Documents.
- M. **Perform:** The word "perform" shall mean that the contractor, at his expense, shall perform all operations including necessary labor, tools, and equipment and further including the furnishing and installation of materials that are indicated, specified, and required to complete such the conditions of the Contract and Contract Documents.
- N. **Project:** The word "project" shall mean the total construction of the work performed under the Contract Documents.
- O. **Provide:** The word "provide" shall mean that the Contractor, at its expense, shall furnish and install the work, complete in place and ready for use, including furnishing of necessary labor, materials, tools, equipment and transportation.
- P. **Required:** The word "required" shall mean "as required to properly complete the work and as required and acceptable to the Owner's Representative" unless otherwise noted.
- Q. **Shop Drawings:** The words "shop drawings" shall mean drawings, diagrams, schedules, and other data specifically prepared for the work by the contractor or his sub-contractor, manufacturer, supplier, or distributor to illustrate some portion of the work.
- R. **Site:** The words "Site" or "Sites" shall be understood to mean the property or properties described within the Contract Documents and indicated on the Drawings where the work shall commence.
- S. **Substantial Completion:** The words "substantial completion" shall mean the time and date when the work, or designated portion thereof, is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the work, or designated portion thereof, for the use for which it was intended, as evidenced by the Owner's Certificate of Substantial Completion. The Certificate of Substantial Completion shall set forth the date on which Substantial Completion is deemed by the Owners Representative in its sole discretion to have occurred. This shall occur only when the site improvements are 100 percent complete and shall exclude correction of final punch list items(s) and the execution of the Landscape Maintenance Period. The issuance of a Certificate of Substantial Completion shall signify the date on which the accounting of Contract "Working Days" or "Calendar Days" is terminated insofar as they may relate to Liquidated Damages.
- T. **Work:** The word "work" whether capitalized or in lower case, shall be understood to mean labor, materials, or both, and the entire construction encompassed by the Contract Documents.

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Testing and inspection requirements.
 - 2. Testing Agency qualifications.
 - 3. Manufacturer's field services.
- B. Related Requirements:
 - 1. Inspections and Testing Required by Laws, Ordinances, Rules, Regulations, Orders, or Approvals of Public Authorities: Conditions of the Contract.
 - 2. Additional requirements for inspections and testing are included in the General Conditions.

1.02 TESTING LABORATORY SERVICES

- A. General:
 - 1. Requirements for testing are included in governing codes and described in various Sections of the Specifications.
 - 2. The Owner will employ and pay for the services of an Independent Testing Agency to perform testing and inspection requirements required by code and other tests and inspections when specified to be performed and paid for by the Owner. Employment by the Owner of the Testing Agency shall in no way relieve Contractor's obligations to perform the Work of the Contract.
 - 3. Tests required by the Specifications and not specified or required by Code to be performed and paid for by the Owner shall be performed by a testing laboratory employed and paid for by the Contractor and meeting the qualification requirements specified in this Section.
 - 4. Where no testing requirements are described, but the Owner decides that testing is required, the Owner may require such testing be performed under current pertinent standards for testing. Payment for such testing will be by the Owner.
 - 5. Inspections, tests, and related actions specified are not intended to limit the Contractor's quality control procedures that facilitate compliance with the Contract Documents.
- B. Qualification of Testing Agency:
 - 1. Meet "Recommended Requirements for Independent Laboratory Qualification," published by American Council of Independent Laboratories.
 - 2. Meet basic requirements of ASTM E329, "Use in the Evaluation of Testing and Inspection Agencies as Used in Construction."
 - 3. Authorized to operate in the State of California.
- C. Limitations of Authority of Testing Agency: Testing Agencies are not authorized to:
 - 1. Release, revoke, alter, or enlarge on requirements of Contract Documents.
 - 2. Approve or accept any portion of the Work.
 - 3. Perform any duties of the Contractor.
- D. Testing Agency Duties:
 - 1. Cooperate, together with Contractor, in notifications, information, scheduling, storage, and access as necessary to meet requirements for service without causing delays on Project.
 - 2. Perform specified inspections, sampling, and testing of materials and methods of construction.
 - 3. Comply with specified standards.
 - 4. Ascertain compliance of materials with requirements of Contract Documents.

5. Notify Owner's Representative and Contractor when test or inspection reveals undesirable conditions, nonconformance, or failure to meet requirements.
6. Promptly submit written report of each test and inspection, with copies to Owner's Representative, Contractor, and governing agencies as required.
 - a. Include all samples taken and tests made, regardless of results.
 - b. Include reports to show specified requirements, and state whether or not test results comply with requirements.
7. Perform additional tests as required by the Owner's Representative.

1.03 CONTRACTOR'S RESPONSIBILITIES

- A. It is the Contractor's responsibility to coordinate the services of all testing and inspection required by the separate Specification Sections whether or not to be performed by the Owner's or Contractor's Testing Agency.
- B. Contractor shall furnish promptly, without additional charge, all reasonable facilities; labor and materials necessary for safe, thorough, and convenient inspection; and tests that may be required by the Contract Documents.
- C. Prepare and submit to Owner's Representative a schedule of tests required of the Testing Agencies at least 15 working days in advance of first test. In addition, Contractor shall give minimum 48 hours' notice to the Testing Agency prior to required tests and inspections.
- D. Furnish, prepare, and deliver test samples and specimens as required by the Testing Agency except where such preparation and handling is to be performed by Testing Agency. Contractor shall be solely responsible for delays due to such samples' not being submitted and resubmitted, if necessary, in the time required for tests or inspections before material is incorporated into the Work.
- E. Cooperate with Testing Agency personnel in providing access to materials being tested or inspected.
- F. Make necessary repairs to in-place work caused by removal of required test samples.
- G. Materials furnished and installed on the Project shall be equal to approved test samples in every respect.
- H. Samples which are of value after testing will remain the property of the Contractor, but no such samples shall be incorporated in the Work without written approval of the Owner's Representative.
- I. Costs associated with testing, inspections and observations due to the following shall be the responsibility of the Contractor:
 1. Re-testing due to failure of initial samples.
 2. Unacceptable changes in sources, lots, or suppliers of materials after original testing established compliance.
 3. Changes in methods or materials of construction by contractor that require testing, inspection or other related services in excess of that require by original design.
 4. Failure to properly notify the Owner's Representative at critical stages of construction.
 5. Requesting testing, inspection, and/or observation of work not ready.

1.04 QUALITY ASSURANCE

- A. Materials furnished and work performed under the Contract shall be subject to review by the Owner's Representative. The Contractor shall be held strictly to the requirements of the Contract Documents with regard to quality of materials, workmanship, and diligent execution of the Contract. Review by the Owner's Representative may include mill, plant, shop, or field review as deemed necessary.

- B. Work performed in the absence of any prescribed inspection or observation may be subject to removal and replacement. In such a case, the entire cost of removal and replacement shall be borne by the Contractor, regardless of whether the work removed is found to be defective or not.

1.05 CONFLICTING REQUIREMENTS

- A. If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Owner's Representative for a decision before proceeding.
- B. The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Owner's Representative for a decision before proceeding.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 EXAMINATION OF CONDITIONS

- A. Prior to installing any portion of the work, the Contractor shall examine the site and verify that site conditions are acceptable to begin work of each section.
- B. Verify that work specified elsewhere has been completed to an appropriate stage to begin work of each section.
- C. Materials or products requiring installation under the supervision or inspection of a specific materials manufacturer or manufacturer's representative shall be examined and/or tested, and accepted in writing, by such representative(s) prior to installation of work.
- D. Notify the Owner's Representative immediately in writing of any irregularities or unacceptable conditions and re-direct work to avoid delay.
- E. Start of work by Contractor shall indicate Contractor's acceptance of site conditions.

3.02 TOLERANCES

- A. Tolerances not specifically identified shall meet the written standards and/or recognized commercial tolerances established for the specific materials or product. Refer to Section 01 42 00 - References.

3.03 REQUIRED TESTS AND INSPECTIONS

- A. "Special Inspections" as required by the CBC. See DSA Form 103 – Special Testing and Inspections.
- B. Additional Tests and Inspections: See the various technical Sections of the Specifications.

3.04 FAILURE TO PASS TESTS

- A. Failure of any material or article to pass specified tests will be sufficient cause for refusal to consider any further samples of the same brand or make of that material or article.

- B. Where an individual material is to be part of an assembly with other materials for incorporation in the Work, failure of the material to pass specified tests or to conform to indicated standards will be sufficient cause for its rejection and removal and replacement, regardless of whether tests or inspections have been made or not in an assembled or in an unassembled condition.
- C. When tests indicate non-compliance, the Contractor shall pay all direct and indirect costs of subsequent re-testing until compliance is established.

3.05 MANUFACTURER'S FIELD SERVICES

- A. When specified in respective Specification Sections, Contractor shall require supplier or manufacturer to provide qualified personnel to observe field conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, testing, adjusting and balancing of equipment as applicable, and to make appropriate recommendations. Contractor is responsible for proper notification of manufacturer's representative before installation of applicable work and for obtaining necessary inspection certificate stating that installation was observed and approved.
- B. Product Performance Verification: The supplier of products specified based on performance criteria shall, at the request of the Agency, inspect the installed product and certify conformance of the product to specified criteria under the installed conditions.
- C. Manufacturer's representative shall submit written report to the Owner's Representative listing observations and recommendations.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Temporary facilities and controls needed for the Work during construction including, but not necessarily limited to:
 - 1. Temporary utilities.
 - 2. Sanitary facilities.
 - 3. Enclosures such as coverings, barricades, and fences.
 - 4. Site security.
- B. Related Requirements:
 - 1. Equipment normally furnished by individual trades in execution of their portions of the Work shall comply with requirements of pertinent safety regulations.
 - 2. Permanent installation and hookup of utility lines are included under other Sections.

1.02 SELECTED REFERENCE AND REGULATORY REQUIREMENTS

- A. National Fire Protection Association (NFPA):
 - 1. 10 - Portable Fire Extinguishers.
 - 2. 241 - Safeguarding Building Construction and Demolition Operations.
- B. State of California, Business and Transportation Agency, Department of Transportation (Caltrans) "Standard Specifications."

1.03 GENERAL

- A. Furnish, install, and pay for meters, equipment, wiring, and piping necessary to provide such utilities.
- B. Additional requirements for construction facilities and temporary controls are included in the General Conditions.
- C. Provide written notification to the Owner to request use of new building equipment for temporary facilities. New building equipment shall not be used for temporary facilities without prior written approval from Owner.

1.04 REQUIREMENTS FOR REGULATORY AGENCIES

- A. Comply with applicable standards referenced in Section 01 42 00 - References, Abbreviations, and Definitions.
- B. All facilities shall be provided and maintained by the contractor in accordance with Cal-OSHA and applicable laws and ordinances.
- C. Contractor shall:
 - 1. Take suitable steps to ensure that public utilities encountered in connection with the Work will not be damaged.
 - 2. Send notices, make necessary arrangements and provide services required for the care of gas mains, water pipes, sewer pipes, conduits, cables, and other equipment or property.

3. Arrange with utility companies for fees required to move or remove their meters, poles, cables, guy wires, or equipment in or set under the property which will interfere with the construction work or which will not be required in the new construction.

PART 2 - TEMPORARY FACILITIES AND CONTROLS

2.01 MATERIALS

- A. General: Materials may be new or used but shall be adequate in capacity for the required usage, shall not create unsafe conditions, and shall not violate requirements of applicable codes and standards.
- B. Tools, extension cords, and electrical equipment shall conform to Underwriters' Laboratory standards and OSHA requirements and shall be in proper working order to preclude hazard to occupants and premises.

2.02 UTILITY SERVICES

- A. Power and Lighting: Furnish, install, and maintain temporary wiring, poles, meter board, service entrance switch, lamps, and equipment as necessary to provide temporary lighting and power for the construction site.
 1. Pay all costs for temporary electrical systems required for construction.
 2. Source of power shall be at location on site acceptable to the Owner's representative. Required temporary transmission lines shall be arranged by contractor in conjunction with the appropriate utility company.
- B. Water:
 1. Install temporary piping and valves downstream from permanent (new) meter locations as acceptable to the Owner's representative. No temporary water services shall be installed prior to meter installation without prior Owner review and acceptance.
 2. Temporary water facilities shall be installed with an acceptable reduced pressure backflow prevention unit furnished and installed by the contractor.
 3. Locate temporary sources of water route, and construct pipelines so that they do not create a hazard or interfere with public access, traffic, or construction operations.
 4. Design and construct such pipelines.
- C. Utility Costs for Contractors: Distribution of temporary utility services to sub-contractors shall be Contractor's responsibility and cost.

2.03 CONTRACTOR'S FIELD OFFICE

- A. The Contractor shall provide and maintain the following minimum facilities and equipment in the field office:
 1. Door top type jobsite desk or equivalent horizontal desk surface for drawings.
 2. Adequate storage facilities.
 3. A laptop or other portable device for internet access and to transmit and receive information to and from the Architect.
 4. Digital camera, with downloading interface, for purposes of communicating field conditions.
 5. Additional facilities and equipment as required by the Architect.

2.04 TEMPORARY TELEPHONE AND INTERNET SERVICE

- A. Contractor shall arrange, provide, and pay for the following temporary service at the site.
 1. A cell phone line and phone for the Contractor's Superintendent.
 2. Internet access for laptop or other acceptable internet access device.

2.05 TEMPORARY SANITARY FACILITIES

- A. Provide, pay for, install, and maintain for duration of the Work, necessary enclosed toilet and sanitary facilities for construction personnel.
 - 1. Sanitary facilities shall be provided, maintained with supplies as required for the number of construction personnel in compliance to local regulations.
 - 2. Locate such facilities a reasonable distance from all working areas.
- B. New or existing restroom facilities, if available, shall not be used by construction personnel except with written permission from the Owner.

2.06 FIRST AID

- A. Provide and maintain first aid supplies as required Cal-OSHA and applicable local ordinances.
- B. Make arrangements with local emergency center and nearest hospital to receive personnel requiring medical attention, including emergencies. Information for emergency center shall be conspicuously displayed at the construction office when an office is required on the Project.

2.07 STORAGE ENCLOSURES

- A. Provide sheds and enclosures necessary for storing applicable materials and equipment.
- B. Enclosures shall be conveniently located, substantially and neatly constructed, and weather tight.
- C. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible.
- D. For exterior storage of fabricated products, place on sloped supports, above ground.
- E. Provide off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of product.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent contamination by foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
- J. Hazardous or Flammable Materials:
 - 1. Use and store hazardous or flammable chemicals, liquids, or gases brought into the Project site in approved containers, conforming to local, state, and national fire codes.
 - 2. Use hazardous materials in a manner that will prevent their accidental release into other areas.
 - 3. Do not discard hazardous materials into the jobsite waste-disposal facilities.
 - 4. Remove empty containers from the premises immediately, and disposed of in a legal manner.

2.08 STAGING AND HOISTS

- A. Furnish and maintain hoists, staging, rigging, and runways required in the execution of the Work.

- B. Erect, equip, and maintain temporary work in accordance with the statutes, laws, ordinances, rules, or regulations of the state or other authorities and state-approved insurance companies having jurisdiction.

2.09 SAFETY AND PROTECTION

A. General:

1. Follow construction procedures necessary to provide a safe working condition through all phases of the Project. Procedures shall conform to the Safety Orders, Division of Industrial Safety, Title 8, California Code of Regulations.
2. Conform to applicable requirements of the State Occupational Safety and Health Administration.
3. The Owner, Owner's Representative, and field inspectors are not hired to review or approve safety procedures followed by the Contractor.

- B. Contractor is solely responsible for outlining safety procedures to be followed by its workers, subcontractors, and related trades working on its Project. Provide for safety of the public both day and night where they are exposed to construction operations.

- C. Contractor shall also take whatever care is necessary to avoid damage to existing facilities or utilities to remain, whether on the Project or adjacent to it, and shall be liable for any damage thereto or interruption of service as a result of its operations.

- D. Provide fences, barricades, railings, warning lights, lights and other protection required by law, Contract Documents, and common sense to ensure public safety.

- E. Give adequate warning to the public at all times whenever a dangerous condition exists as the result of construction work. Furnish Owner's Representative with name, address, pager number and local telephone number of the superintendent responsible and at least one other person for the maintenance of barriers, signs, lights and other accident prevention devices for evenings and weekends.

F. Protection of Work and Facilities:

1. Protect adjacent property, roads, streets, curbs, planting areas, erosion control materials and other improvements during construction operations. All damaged materials shall be replaced and/or repaired at the expense of the contractor and to the satisfaction of the Owner's Representative.
2. Protect installed work and provide special protection where applicable.
3. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
4. Contractor shall install temporary construction fencing per contract documents and place signage on the fence stating "Construction Area – Keep Out" and "No Trespassing". Signs shall be located along fence every 75 feet.

- G. Vehicular Safety: Motorized and/or self-propelled construction equipment shall be equipped with a hub-cap type reverse signal alarm.

2.10 WATER CONTROL

- A. Furnish and maintain pumps or other devices that may be required by Contractor's work under this Contract.

- B. The Work shall be kept free of standing water during construction.

2.11 MAINTENANCE OF TRAFFIC, ACCESS, AND PARKING

- A. Throughout progress of work, do not interfere with use of or access to adjacent buildings or property.

- B. Construct, designate and maintain specific vehicular access as required for the orderly progress of the work.

1. Engineer construction access roads and parking areas as necessary to provide suitable support during all weather conditions for anticipated loads, including municipal fire apparatus.
 2. Provide adequate surface drainage without interrupting natural flow of existing drainage.
- C. Parking:
1. Provide temporary on-site parking to accommodate construction personnel and Owner's Representative to the greatest extent possible. Coordinate location with the Owner's Construction Coordinator.
 2. Contractor shall make arrangements for offsite parking, if required, with adjacent public parking facilities to accommodate vehicles of construction personnel. Cost of parking is the responsibility of the Contractor and/or its subcontractor.
- D. Restore temporary vehicular access and parking areas to original or specified conditions prior to Project Final Acceptance.
- E. Move and relocate traffic signs and signals, controls, power and light poles, and similar utility and public service items obstructed by Project barricades and operations.
- F. Maintain accessibility from street at all times to fire hydrants within construction area.
- G. Construction traffic shall be routed, whenever possible, to avoid noise impacts on the surrounding neighborhood.
- H. Construction period for trucks hauling fill and piling materials shall be restricted to nonpeak hours to minimize impact to rush hour traffic and to avoid noise impacts on the surrounding existing residential areas.
- I. Vehicles (wheels in particular) shall be cleaned before leaving site so as to minimize impact on City streets.
- J. Clean and sweep all streets muddied or littered from construction activity to the satisfaction of the City.

2.12 HAUL ROUTES

- A. Comply with any and all local governing ordinances and guidelines.

2.13 FIRE PROTECTION

- A. Take precautions to prevent and eliminate fire hazards. The Contractor shall be responsible for providing, maintaining, and enforcing any necessary or required fire prevention safeguards until project final acceptance.
- B. Provide fire extinguishers on the premises during the course of construction of the type and sizes recommended by the NFPA 10 and NFPA 241 to control fires resulting from the particular work being performed. Instruct employees in their use. Place extinguishers in the immediate vicinity of the work being performed, ready for use.
- C. Fire Inspection: The Contractor's Superintendent shall inspect the entire project as necessary to make certain the required precautions are being maintained.
- D. Combustible and/or flammable Building Materials: Only an appropriate working supply of flammable fuel or building materials shall be located inside storage facilities.
- E. During the use of hazardous equipment, such as acetylene torches, welding equipment, bitumen kettles, and similar devices, no work shall start or equipment used unless fire extinguishers of specified type and capacity are placed in the working area and available for use by workmen using such hazardous

equipment. Extinguishers shall meet standards established by Underwriter's Laboratory, and shall be inspected at regular intervals and recharged by the contractor as necessary.

- F. Combustible and/or flammable Waste Materials. Oil-soaked rags, papers, and other highly combustible materials must be stored in closed metal containers with tightly-hinged lids at all times, and shall be removed from the site at the close of each day's work and more often when necessary.

2.14 TOOL AND ELECTRICAL EQUIPMENT

- A. Tools, extension cords, and electrical equipment shall conform to Underwriters' Laboratory standards and OSHA requirements and shall be in proper working order.

2.15 TEMPORARY SIGNS AND NOTICES

- A. Contractor shall post and maintain all signs and notices required by law or ordinance. No advertisements will be permitted on the premises without approval of the Owner.

2.16 TRASH REMOVAL

- A. Store trash or rubbish resulting from construction within the Contract work area.
- B. Provide the necessary on-site containers for the collection of recycling materials, waste materials, and debris.
- C. Remove waste materials and debris from the site periodically and dispose of at recycling centers or legal disposal sites in accordance with governing construction and demolition debris regulations.
- D. Keep the work area clean at all times. Increase frequency of trash removal, when requested by the Owner, to conform to this requirement.
- E. Waste material and debris shall not be buried at the site.
- F. Burning of trash and debris on the site will not be permitted.

2.17 SECURITY

- A. All site security shall be the responsibility of the Contractor at its expense and no additional cost to Owner.
- B. Employment of security personnel for non-construction hours shall be left to the discretion of the Contractor, who shall be fully responsible for any theft or damage to any material, equipment or to portion of the work until Project Final Acceptance.
- C. Security provisions shall be provided 24 hours a day, 7 days a week, including holidays, until acceptance of the Project by Owner.
- D. If security personnel are used, provide Owner's Representative with the name and pager number or 24-hour telephone number of a contact person who shall have primary responsibility for security.

2.18 DUST CONTROL

- A. Blowing dust shall be reduced by timing construction activities so that paving begin as soon as possible after completion of grading and by landscaping disturbed soils as soon as possible.

- B. All portions of the site shall be watered as many times a day as required to ensure proper dust control seven (7) days a week for the duration of the Project.
 - 1. Sprinkle unpaved construction areas with water at least twice per day or as necessary to eliminate dust.
 - 2. Cover stockpiles of soil, sand, and other similar materials.
 - 3. Cover trucks hauling debris, soil, sand, and other similar materials.
- C. The Contractor shall obtain reclaimed water from the City, if available, for compliance with the above requirements.
- D. The Contractor shall maintain and operate construction equipment so as to minimize exhaust emissions of PM10 and other pollutants by means of the following:
 - 1. Prohibition on idling of motors of equipment that is not in use and by waiting trucks.
 - 2. Implementation of specific maintenance programs to reduce emissions for equipment in frequent use during construction.

PART 3 - EXECUTION

3.01 SYSTEMS

- A. Maintain and operate systems to assure continuous service.
- B. Modify and extend systems as work progress requires.

3.02 STORM WATER POLLUTION PREVENTION

- A. Contractor shall be required to adhere to the state regulations to control the discharge of stormwater pollutants and shall implement best management practices (BMP's) as shown within the contract drawings and as needed to prevent erosions or pollution from entering any stormwater systems.

3.03 MAINTENANCE AND REMOVAL

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the work.
- B. Completely remove temporary materials and equipment when their use is no longer required.
- C. Clean and repair damage caused by temporary installations or use of temporary facilities.
- D. After removal of temporary facilities, restore existing facilities used for temporary services back to an "as was" or better condition subject to the discretion of the Owner's Representative
- E. Full compensation for cleanup shall be included in other items of work. No separate compensation will be allowed for work pertaining to cleanup or disposal of material.

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Field engineering services for proper completion of the Work including, but not necessarily limited to:
 - 1. Establishing and maintaining lines and levels.
 - 2. Structural design of shoring, forms, and similar items provided by the Contractor as part of its means and methods of construction.
 - 3. Establishing horizontal and vertical control for site construction items.
- B. Related Requirements:
 - 1. Section 01 78 29 - Conformance Survey

1.02 ADMINISTRATIVE REQUIREMENTS

- A. Submittal Procedures: Informational submittals shall be submitted in accordance with Section 01 33 00 - Submittal Procedures.

1.03 INFORMATIONAL SUBMITTALS

- A. Name and address of surveyor or professional engineer to the Owner's Representative.
- B. Upon request of the Owner's Representative, submit:
 - 1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.
 - 2. Documentation verifying accuracy of field engineering work.
 - 3. Certification, signed by the Contractor's retained field engineer, certifying that elevations and locations of improvements are in conformance or nonconformance with requirements of the Contract Documents.

1.04 QUALITY ASSURANCE

- A. Contractor shall employ a California Registered Civil Engineer or Licensed Land Surveyor, hereafter referred to as Surveyor, to lay out the entire work and set grades, lines, levels, and positions throughout the site.

1.05 SURVEY REFERENCE POINTS

- A. Existing horizontal and vertical control points for the Project are those designated on the Owner's original survey. Locate and protect these control points prior to starting site work, and preserve permanent reference points during construction.
- B. Do not change or relocate reference points or items of the work without specific review and acceptance by the Owner's Representative.
- C. Promptly advise the Owner's Representative when a reference point is lost or destroyed, or requires relocation because of other changes in the work. Upon direction of the Owner's Representative, replace reference stakes or markers according to the original or appropriate survey control.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.01 LAYING OUT THE WORK

- A. Prior to beginning work, locate or set all general reference points, bench marks, establish monuments and take action as necessary to prevent their destruction, then layout all lines, elevations and measurements for entire work.
- B. Verify figures and dimensions shown on the Drawings and son surveys furnished by the Owner before starting work. Notify the Owner's Representative immediately of any discrepancies and re-direct work to avoid delay.
 - 1. Contractor shall accept responsibility for errors resulting from failure to notify Owner's Representative of known discrepancies.
 - 2. Offsets will be as agreed upon, in writing, by the Contractor and the Owner's Representative.
- C. Establish monuments on curbs, manholes or pavements with concrete embedded steel pipe with lead plug and/or brass nail with washer, as acceptable to the Owner's Representative.
- D. Verify layout from time to time as work progresses.

3.02 RECORDS

- A. Maintain a complete and accurate log of all control and survey Work as it progresses in accordance with the requirements of Section 01 78 39 - Project Record Documents. Show exact locations of the monuments if any are disrupted or destroyed.

END OF SECTION

SECTION 01 77 00
CONTRACT CLOSE-OUT

PART 1 - GENERAL

1.01 SUMMARY

- A. Scope of work: This section specifies administrative and procedural requirements for project close-out, that may include but are not necessarily limited to:
 - 1. Inspection and/or observation procedures
 - 2. Project record document submittal
 - 3. Operating and maintenance manual submittal
 - 4. Warranty submittal
 - 5. Final cleaning
- B. Related sections can include, but may not be limited to the following:
 - 1. All pertinent Sections of the Specifications

1.02 SUBSTANTIAL COMPLETION

- A. Refer to the General Provisions as applicable, and section 01 42 00 for procedures required to establish Substantial Completion.
 - 1. Final, regular Certificate for Payment (progress payment) shall be issued when all pertinent requirements of the achieving Substantial Completion are met. Final retention payment shall be made after project Final Acceptance and conclusion of any specified Landscape Maintenance Periods subject to the discretion of the Owner's representative.
- B. Inspection Procedures: Upon receipt of a request for inspection or observation, the Owner's representative shall either proceed or advise the Contractor of unfilled requirements. The Owner's representative shall prepare the Certificate of Substantial Completion following review, or advise the contractor of what must be completed or corrected by "punch-list" before the Certificate is issued. Upon receipt of "punch-list", contractor shall complete all work described in a timely manner subject to the discretion of the Owner's Representative.
 - 1. The Owner's representative shall repeat inspection and/or observation when requested provided the contractor has made the request within the specified lead time and given written assurance that the "punch-list" work has been completed.
 - 2. Results of the completed inspection and/or observation shall help form the basis of requirements for Final Acceptance and if acceptable, may signal the beginning of the specified Landscape Maintenance Period.

1.03 UNCORRECTABLE WORK

- A. Should the Owner's representative determine it is not practical or possible for the contractor to correct work that is damaged or improperly executed, an equitable deduction from the Contract sum may be made at the sole discretion of the Owner's representative.

1.04 CLOSE-OUT SUBMITTALS

- A. Submit two (2) copies of the following, where applicable, in accordance with applicable Contract Documents:
 - 1. Project record documents (as-constructed)
 - 2. Operation and maintenance manuals

3. Warranties, guaranties, and bonds
 4. Keys and keying schedule
 5. Spare parts and extra materials
 6. Other items required by the Specifications
 7. Binder of all manufactured items final submittal information that were installed or provided for the project.
- B. Specified number of copies of above close-out submittals shall be received and accepted by the Owner's representative before Final Acceptance shall be given.
- C. In addition to those items previously mentioned in this section, the contractor shall submit to the Owner's representative the following items before a Notice Of Completion will be filed:
1. Up-to-date sub-contractor list with names, addresses and telephone numbers.
- D. Final Adjustment of Account:
1. Submit a final statement of accounting to the Owner's representative showing all adjustments to the Contract sum.

1.05 MAINTENANCE MANUALS

- A. Submit two (2) copies of proposed manual(s) to the Owner's representative for review and acceptance. All maintenance manuals shall be received and accepted by the Owner's representative before Final Acceptance shall be given.
- B. Organize operating and maintenance data into properly indexed heavy duty 2-inch, 3-ring vinyl covered binders. Mark appropriate identification on front and spine of each binder. Manuals can include but are not limited to the following types of information:
1. Emergency instructions
 2. Spare parts list
 3. Copies of warranties or actual warranty cards
 4. Recommended "turn around" cycles
 5. Inspection procedures
 6. Shop drawings and product data
- C. Product submittal items (1.04-A-7) can be provided with warranty information binders.

1.06 DEMONSTRATION

- A. Prior to Final Acceptance, the contractor shall fully instruct Owner's representative's designated operating and maintenance personnel in the operation, adjustment and maintenance of all products, equipment, and systems installed.
1. Provide services of factory trained instructors from the manufacturers of each major item of equipment or system, if necessary or requested by the Owner's representative.
- B. Operation and maintenance manual(s) shall be fully described at this instruction meeting.
1. Review contents of manual(s) with personnel in full detail to explain all aspects of operations and maintenance such as:
 - a. Maintenance manuals
 - b. Record documents
 - c. Spare parts and materials
 - d. Tools
 - e. Fuels
 - f. Identification systems

- g. Control sequences
 - h. Hazards
 - i. Cleaning
 - j. Warranties and bonds
 - k. Maintenance agreements and similar continuing commitments.
2. As part of instruction for operating equipment, demonstrate the following procedures:
- a. Start-up
 - b. Shutdown
 - c. Emergency operations
 - d. Noise and vibration adjustment
 - e. Safety procedures
 - f. Economy and efficiency adjustments
 - g. Effective energy utilization

1.07 WARRANTY/GUARANTY FORMAT

- A. Provide written warranties, guaranties (except manufacturers' standard printed warranties and/or guaranties), addressed to the Owner's representative, in the format shown within the General Provisions. Manufacturers' standard printed warranties and/or guaranties shall be submitted as-is.
- B. Warranties and guaranties shall be submitted in duplicate, in the format shown within the General Provisions, signed by all pertinent parties and by the contractor in every case, with modifications as accepted by the Owner's representative to suit the conditions pertaining to the warranty or guaranty. Collect and assemble written warranties and guaranties into bound booklet form, and deliver bound books to the Owner's representative for review.

1.08 REMOVAL OF TEMPORARY FACILITIES

- A. Prior to final inspection, the contractor shall remove tools, materials, sheds, temporary power poles, temporary tree protection, and other articles from the project site. Should the contractor fail to take prompt action, the Owner's representative may, given 30 days written notice, treat them as abandoned property.

1.09 FINAL SITE CLEANING

- A. Broom clean and power wash exterior paved surfaces and adjacent public streets. Utilize appropriate cleaning methods to remove spills, stains, tire tracks, etc. from all paved surfaces. Rake clean other surfaces of the site.
- B. Hose down and scrub walls and paving surfaces dirtied or stained as a result of the construction work, as directed by the Owner's representative.
- C. Remove from the site construction waste, unused materials, excess earth, and debris resulting from the work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

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PROJECT RECORD DOCUMENTS

1.01 SUMMARY

- A. Section Includes: Requirements for preparing, maintaining, and submitting the Project Record documents.
- B. Related Requirements:
 - 1. Section 33 10 10 - Reclaimed Water Systems
 - 2. Section 33 40 00 - Storm Drainage Utilities

1.02 DOCUMENT MAINTENANCE

- A. Maintain one record copy of each of the following at the site for the Owner:
 - 1. Contract Drawings, Specifications, Addenda, Change Orders, RFIs and other modifications marked currently to record changes made during construction.
 - 2. Reviewed submittals.
 - 3. RFI log.
 - 4. Addenda log.
 - 5. Submittal log.
 - 6. Inspection reports and log.
- B. Documents shall be kept at the site and maintained in a clean, dry, legible condition.
- C. The Contractor shall advise the Owner's Representative of changes and deviations made during construction.
- D. Make documents available at all times for review by Owner's Representative.
- E. Comply with related requirements of the individual Specification Sections.

1.03 RECORDING

- A. Label each document "PROJECT RECORD."
- B. Do not permanently conceal any work until required information has been recorded.
- C. Drawings:
 - 1. Make day-to-day changes and notations on a specially designated complete "Job Set" of prints or digital files as the work proceeds.
 - 2. Markings and notations shall be neatly and accurately made, using nonfading, clear, permanent markings. Use contrasting colors for different disciplines of work and where required for clarity.
 - 3. Clearly identify deviations by drawing a "cloud" around affected area and make sufficient notations to describe the change.
 - 4. Convert schematic layouts to portray precise physical layout (including depths) of exposed and concealed work.
 - 5. Drawings shall be marked to indicate:
 - a. Measured depths of various elements of foundation in relation to survey or other approved datum.
 - b. Measured horizontal and vertical locations of underground utilities and appurtenances referenced to permanent surface improvements.
 - c. Measured locations of utilities and appurtenances concealed in construction, referenced to visible and accessible features of structure.
 - d. Variations in layout of site improvements.

- e. Field changes of dimensions and detail.
 - f. Changes made by Change Order or Construction Change Directive.
 - g. Significant details not shown on the original Contract Drawings.
 - 6. Contractor shall solely bear any cost of uncovering, recording and re-covering work not recorded on Job Set.
 - 7. Upon completion of the Work and unless otherwise mutually agreed between Owner and Contractor, all changes and notations shall be neatly and accurately transferred by the Contractor to a complete set of Drawings, as originally issued for construction, obtained from the Owner.
 - a. Where the Contract Drawings are not of sufficient size and detail, the Contractor shall furnish its own drawings for incorporation of details and dimensions.
 - b. Each sheet of record drawing shall be signed and certified by the Contractor as to their correctness and turned over to the Owner's Representative.
 - 8. Record Drawings are specifically required for the following work:
 - a. Recycled water distribution.
 - b. Storm and site drainage.
- D. Specifications:
- 1. On a complete and designated copy or digital file of the Project Manual, legibly mark each Specification Section to record:
 - a. Manufacturer, trade name, catalog number, color designation (if applicable), and supplier of each product and item of equipment actually installed.
 - b. Changes made by Addendum, Change Order, or Construction Change Directive.
 - c. Other matters not originally specified.
 - d. Where selection of manufacturers is offered, indicate which manufacturer's product was installed.
- E. Product Data: Maintain one copy or digital file of each product data submittal. Note related Change Orders and markup of Contract Drawings and Specifications.
- 1. Mark these documents to show significant variations in actual work performed in comparison with information submitted. Include variations in products delivered to the site and from the manufacturer's installation instructions and recommendations.
 - 2. Give particular attention to concealed products and portions of the Work that cannot be readily reviewed by direct observation.
- F. Samples: Immediately prior to Substantial Completion, meet with Owner's Representative and Owner's personnel at the Project site to determine which samples are to be transmitted to the Owner for record purposes. Comply with the Owner's instructions regarding delivery to the Owner's storage area.
- G. Miscellaneous Record Submittals: As specified in other Specification Sections.
- 1. Immediately prior to Substantial Completion, complete these miscellaneous records and place in good order.
 - 2. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Digital files are acceptable.
 - 3. Submit for the Owner's records as directed.

1.04 INTERIM REVIEW

- A. Project Record Documents are subject to review at time of review of payment request.
- B. If Record Documents are not properly maintained, Owner may withhold all or a portion of payment to Contractor.

1.05 SUBMITTALS

- A. At completion of work under the Contract, deliver Record Documents as directed.

- B. Partial submittals are not acceptable, unless specifically acceptable to Owner.
- C. Submit documents specified and required prior to claim for final Application and Certificate for Payment.
- D. Accompany submittal with transmittal letter, in duplicate, containing:
 - 1. Date.
 - 2. Title of Work.
 - 3. Contractor's name and address.
 - 4. Title of each Record Document.
 - 5. Certification that each document, as submitted, is complete and accurate.
 - 6. Signature for Contractor or its authorized representative.

END OF SECTION