SECTION 01010

SUMMARY OF WORK

PART 1 - GENERAL

1.01 WORK COVERED BY CONTRACT DOCUMENTS

A. Work Covered by Contract Documents: The work of this Contract comprises construction of the City of Palm Springs Animal Care Facility in Palm Springs, California.

1.02 CONTRACTS

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

1.03 ACCESS TO SITE

A. Notify the Owner a minimum of 48-hours in advance of performing work which necessitates closing or interfering with traffic on public thoroughfares, parking areas, and driveways. Obtain written permission prior to effecting such closures and interruptions.

B. The Owner will designate an entrance to the Project site for the Contractor's use.

1.04 SCHEDULING

A. Operations Schedule:

1. Develop an Operations Schedule specifically for use as a coordination tool between the Owner and construction activities.

2. This schedule shall indicate the anticipated date, time, and duration of each of the various activities which could affect existing facilities or activities, or which could cause excessive noise, disturbance or nuisance.

3. Review this schedule with the Owner prior to commencing work and periodically thereafter as needed; incorporate adjustments as necessary.

B. Interruption of Systems: Arrange and perform work involving existing utilities to result in minimum shutdown time.

1.05 CONTRACTOR USE OF PREMISES

A. During the construction period, the Contractor shall have use of the premises for construction operations, including use of the site.

1.06 ADJACENT SITE CONDITION SURVEY

A. Prior to commencement of work, jointly survey the site, paving, plant life, existing adjacent buildings, and other items with the Owner, noting and recording existing damage such as cracks, sags, unhealthy plant life, and other damage.

B. This record shall serve as a basis for determination of subsequent damage to these items due to settlement, movement, or Contractor's operations.

C. Existing damage observed shall be marked and the official record of existing damage shall be signed by the parties making the survey.

D. Cracks, sags, and damage to the site, paving, plant life, and other items not noted in the original survey but subsequently observed shall be reported immediately to the Owner's Representative.

1.07 PROTECTION OF EXISTING UTILITIES

A. The Drawings do not show all existing above and below grade drainage lines; storm drains; sewer, water, gas, and electrical lines; and other items known to exist in the area of the work.

B. Locate these existing installations before proceeding with excavation or other operations which may cause damage, maintain them in service where appropriate, and repair damage caused by the performance of the work, at no increase in the Contract Sum.

C. Additional compensation or extension of time due to below grade structures not shown or brought to the Contractor's attention, including reasonable action taken to protect, relocate, and repair damage to same, shall be determined as specified in the General Conditions.

1.08 USE AND OCCUPANCY OF WORK PRIOR TO ACCEPTANCE BY OWNER

A. The Owner may use and occupy the building before formal acceptance under the following conditions:

1. A Certificate of Substantial Completion shall be prepared and executed as provided in the General Conditions. The Certificate of Substantial Completion shall be accompanied by a written endorsement of the Contractor's insurance carrier and surety permitting occupancy by the Owner during the remaining period of the work.

2. Occupancy by the Owner shall not be construed as being an acceptance of that part of the work occupied.

3. The Contractor will not be held responsible for damage to the occupied part of the work resulting from the Owner's occupancy.

4. Occupancy by the Owner shall not be deemed to constitute a waiver of existing claims the Owner or Contractor may have against each other.

5. If required by the Owner for areas it has occupied, the Contractor shall make available, on a 24 hour-a-day, 7 day-a-week basis, utility services, heating, and cooling which are in condition to be put in operation when such use and occupancy is taken. Responsibility for the operation and maintenance shall remain with the Contractor until the building is complete and the areas occupied, at which time operation and maintenance shall be assumed by the Owner if Contract requirements for such equipment have been met.

6. Make an itemized list of each piece of equipment operated during occupancy, with the date operation commences; submit to the Architect. This list shall be the basis for the commencement of guarantee/warranty periods on the equipment operated during the Owner's occupancy.

7. The Owner will pay for utility costs associated with occupancy during construction.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01230

ALTERNATES

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section identifies each Alternate by number and describes the basic changes to be deleted from the work when each Alternate is made a part of the work by specific provisions in the Agreement between the Owner and Contractor.

B. The Drawings and Specifications Sections referenced within the respective Alternates describe requirements for the work under each Alternate.

C. Coordinate related work and modify surrounding work as required to integrate the work under each Alternate and provide a completed assembly.

1.02 DESCRIPTION OF ALTERNATES

1. **Deductive Alternate No. 1** – Delete south Planter #2 located between column lines A and B and 14 and 19 and install only the east concrete wall with the metal picket fence above as per the base bid details.

2. **Deductive Alternate No. 2** – Delete Interior Dog Wards #4 (304) and #5 (305) along with exterior kennels and associated exterior areas including Get Acquainted Area #6 and Dog Exercise Areas #8 and #9 along with associated gates and fencing. Reduce length of CMU site wall north of Dog Exercise areas to 6'-0" beyond column line L. Gates 17 and 19 also to be deleted. Add Gates 32 and 33 at Dog Exercise Area and relocate Gates 18 and 20 along with CMU site wall at east side of Adoption Courtyard. Essentially, all work east of column line L and north of column line 14.4 to be deleted. Relocate decomposed granite path along CMU site wall at east side of Adoption Courtyard from just north of relocated Gate G18 and continue path south and then east along north building wall at column line 14.4. The interior wall along column line 14.4 will become an exterior wall type E13 with associated grade beam. Hollow metal Doors 304 and 305 also are to be deleted; however, the exterior wall will be framed to accept the future addition of these doors. Add Window 341 at exterior wall along column line L where Door 305 was. Add Windows 349A and 353A at north exterior wall along column line 14.4.
   Electrical: Delete both normal and emergency lighting in this area. Exterior fixtures will move to column line K. Delete receptacles at column line L and column line 10 between L and M. Shift receptacle on column line M to column line K.

3. **Deductive Alternate No. 3** – Delete north and south segments of the horizontal Aluminum Louver Sunshade located at the west building exterior elevation. See exterior elevations.

4. **Deductive Alternate No. 4** – Delete Mondo rubber flooring at Training Room 117 and substitute with sheet vinyl flooring. Under this alternate the slab will not be depressed.

5. **Deductive Alternate No. 5** – Construct only the roof, slab and structural shear/bearing walls of Socialization Enclosure 136. Delete Doors 128A, 129A, 130A and 131A with the four openings framed to accept the future addition of these doors. Also delete Doors 136 and 136C, as well as Windows 136, 136.2, 136.3, 136.4, 136.5 and 136.6. The west wall along column line E is to become an exterior wall type E13. All interior finishes and casework to be deleted. All exposed exterior wall surfaces to be cement plaster. Plumbing devices along the south wall to remain as well as the floor drain. Locate fence and gate at east side of Training Room Courtyard to be perpendicular to north wall of Socialization Enclosure 136 and east of opening in same wall.
   Electrical: Delete lighting fixtures indicated. Install four weatherproof wrap-around fixtures and connect to exterior lighting circuit on time clock. Delete receptacles on column line F. Provide conduit and wire to these locations with blank cover plates.

6. **Additive Alternate No. 6** – Add a piped oxygen and gas vak system which would serve the

Preparation Room 355 and Surgery 356. The oxygen canister racks, oxygen connections and alarms will be located in Oxygen Storage Room 361. All exposed exterior wall surfaces to be cement plaster. Delete Door 361, door frame to remain.

7. **Deductive Alternate No. 7** – Delete the Emergency Generator and related duplicate wiring for designated items attached to the emergency power. Reduce size of Emergency Generator enclosure. Exit signs currently connected to emergency power to be changed to Battery Pack. Emergency Lighting to be changed to wall units located at all designated emergency lighting locations.
Electrical: Where possible, emergency batteries should be incorporated into the ceiling-mounted fixtures. These batteries should be capable of providing 1100 lumens of back up lighting when utilized with 4'-0" fluorescent fixtures. They shall be capable of 700 lumens when used with compact fluorescent fixtures. Contractor is to assure that code-required one footcandle is met in all exit paths. In addition to this emergency lighting, provisions shall be made to use wall-mounted emergency fixtures for those areas where no ceiling lighting can be use for the egress lighting, as well as all exterior paths as required by code.

8. **Deductive Alternate No. 8** – Delete Dog Exercise Enclosures #1 through #7 and seven related gates at north Dog Exercise Courtyard. The north fence will be continuous along the line currently shown and will run north and south along column line L and terminate at the north CMU wall at column line 10 and at south face of angled CMU site wall. The north fence will also terminate at the Socialization Enclosure 136 exterior wall to the west.

9. **Deductive Alternate No. 9** – Delete the two north Planters #3 and #4. Planter #4 will retain its concrete south wall with metal picket fence above as per base bid details.

10. **Deductive Alternate No. 10** – Delete the built-in wood benches at Dog Waiting 201.1 and Cat Waiting 201.2 and finish walls to match the rest of the room.

11. **Deductive Alternate No. 11** – Delete all built-in casework at Retail 112. Finish walls to match the rest of the room.

12. **Deductive Alternate No. 12** – Delete lockers at Locker Room 314.

13. **Additive Alternate No. 13**– Add an Allowance for Plan Check Adjustments of $25,000.

14. **Additive Alternate No. 14** – Add an Allowance for the Design and Installation of a Photovoltaic System, as diagramed on Sheet A0.50, of $600,000. The City retains the right to separately select a Photovoltaic Subcontractor and assign the Subcontractor to the General Contractor for oversight of the design and installation. Also, the city reserves the right to have the system designed and built by a Subcontractor on a lease basis, and assign the Subcontractor to the General Contractor for coordination purposes for which the General would receive a fee for coordinating the installation from the allowance.

15. **Deductive Alternate No. 15** – Delete LEED Credit Requirements Materials and Resources Credits 4.1 Recycled Content, 10%, 4.2 Recycled Content, 20%, 5.1 Local/Regional Materials, 10%, and 5.2 Local/Regional Materials, 20% as outlined in Specifications Section 01354 Sustainable Design Requirements and Appendix B – LEED Scorecard.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01250

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

A. This section specifies administrative and procedural requirements for handling and processing Contract modifications.

1.02 CHANGE ORDER PROPOSAL REQUESTS

A. Owner-Initiated Proposal Requests: Proposed changes in the work that will require adjustment to the Contract Sum or Contract Time will be issued by the Owner's Representative, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.

1. Proposal requests issued by the Owner's Representative are for information only. Do not consider an them instruction either to stop work in progress, or to execute the proposed change.

2. Unless otherwise indicated in the proposal request, within 20-days of receipt of the proposal request, submit to the Architect for the Owner's review an estimate of cost necessary to execute the proposed change.

a. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

c. Include a statement indicating the effect the proposed change in the work will have on the Contract Time.

B. Contractor-Initiated Change Order Proposal Requests: When latent or other unforseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.

1. Include a statement outlining the reasons for the change and the effect of the change on the work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.

2. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.

3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

4. Comply with requirements in Section 01630 if the proposed change in the work requires the substitution of one product or system for a product or system specified.

5. Proposal Request Form: Use AIA Document G709 for Change Order Proposal Requests or other form approved by the Owner.

1.03 CONSTRUCTION CHANGE DIRECTIVE

A. Construction Change Directive: When the Owner and Contractor are not in total agreement on the terms of a Change Order Proposal Request, the Architect may issue a Construction Change Directive on AIA Form G714, instructing the Contractor to proceed with a change in the work, for subsequent inclusion in a Change Order.

1. The Construction Change Directive will contain a complete description of the change in the work and designate the method to be followed to determine change in the Contract Sum or Contract Time.

B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

C. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

1.04 CHANGE ORDER PROCEDURES

A. Upon the Owner's approval of a Change Order Proposal Request, the Architect will issue a Change Order for signatures of the Owner and Contractor on AIA Form G701, as provided in the Conditions of the Contract.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01270 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for unit prices.

B. See Division 1 Section "Allowances" for procedures for using unit prices to adjust quantity allowances.

1.2 DEFINITIONS

A. Unit price is an amount proposed by bidders, stated on the Bid Form, as a price per unit of measurement for materials or services added to or deducted from the Contract Sum by appropriate modification, if estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

B. Measurement and Payment: Refer to individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

C. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

D. List of Unit Prices: A list of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

END OF SECTION 01270

SECTION 01310

PROJECT COORDINATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Section Includes: Provision of coordination of the work of the Contract.

1.02 GENERAL COORDINATION

A. Contractor shall be responsible for all project coordination.

B. Coordinate schedules, submittals, and work of the various trades to ensure efficient and orderly sequence of installation of construction, with provisions for accommodating items to be installed later. Coordinate the work among the Specifications and Drawings. Work shown on any drawing or Specification is required by the Contract irrespective of the trade subdivision. Contractor shall require each trade subcontractor to review all other subdivisions of the documents for related work and shall coordinate the subcontracts accordingly.

C. Require all parties involved in the performance of the work to cooperate in the overall coordination of the work under the direction of the Contractor. Each party, when requested to do so, shall furnish information concerning its portion of the work, and shall respond promptly and reasonably to the decisions and requests of persons designated with coordination, supervisory, administrative, or similar authority.

D. The Drawings use graphic symbols to show certain physical relationships of the various elements and systems and their interfacing with other elements and systems. Establishing and coordinating the actual physical relationships is the responsibility of the Contractor. Layout and arrange all elements to contribute to safety and efficiency while maintaining the intent of the design. Before work proceeds in areas of potential conflict for installing different components of the work, Contractor shall prepare supplementary drawings for review by the Owner and resolve the conflict.

E. Coordinate continuous checking of architectural and structural clearances for accessibility of equipment and mechanical and electrical systems. No allowances of any kind will be made for the Contractor's failure to coordinate sequence of installing materials/equipment into position. Contractor shall verify that equipment will fit within the prescribed equipment room spaces.

F. Prior to installation of each major unit of work that requires coordination and interfacing with other work, meet at Project site with installer and representatives of manufacturers and fabricators who are involved in or affected by unit of work. Review progress of other work and preparations for particular work under consideration.

G. Coordinate the tolerances of all materials to ensure a proper fit in achieving the requirements of the Contract Documents.

H. Coordinate matching finish, texture, color, etc. for the components in the Project.

I. Coordinate work of like materials by submitting pilot samples to the Architect from review of acceptable ranges of finish textures and color variations.

J. Coordinate completion and clean up work of various trades in preparation for the Substantial Completion and for occupancy.

1.03 SUBCONTRACT COORDINATION

A. Coordinate the work and do not delegate responsibility for coordination to any subcontractor.

B. Anticipate the interrelationship of all subcontractors and their relationship with the work.

C. Resolve differences or disputes between subcontractors concerning coordination, interference, or extent of work between Sections of the Specifications. Contractor's decisions, if consistent with the Contract Document requirements, shall be final.

D. Coordinate the work of subcontractors so their portions of the work are performed in a manner that minimizes interference with the progress of the work.

1.04 ADMINISTRATION

A. General: Prepare a written memorandum on required coordination activities. Include such items as required notices, reports, and attendance at meetings. Distribute this memorandum to each trade performing work at the Project site. Prepare similar memorandum for separate contractors where interfacing of their work is required.

B. Coordination Meetings: Conduct general project coordination meetings with subcontractors at least weekly at regularly scheduled times convenient for all parties involved. These meetings are in addition to specific meetings held for other purposes, such as regular project meetings and special pre-installation meetings. Request representation at each meeting by every party currently involved in coordination or planning for the work of the entire Project. Keep the Owner informed about coordination meetings. Conduct meetings in a manner that will resolve coordination problems. Record results and minutes of each meeting and distribute copies to everyone in attendance. The Owner may attend weekly jobsite meetings with subcontractors.

C. Superintendent: Provide a full-time superintendent experienced in administration and supervision of building construction. This superintendent shall be authorized to act as general coordinator of interfaces between units of work. This superintendent shall be on site, continuously during the construction period. Construction coordination shall be his/her principal duty.

1. For the purpose of this provision, "interface" is defined to include scheduling and sequencing of work, sharing of access to work spaces, installations, protection of each other's work, cutting and patching, tolerances, cleaning, selections for compatibility, preparation of coordination drawings, inspections, tests, and temporary facilities and services.

2. Mechanical/Electrical Coordination: Superintendent shall be experienced in administrative and supervisory coordination of mechanical and electrical work. This experience in coordination shall include coordination of the type of mechanical/electrical work required for this Project. The mechanical/electrical coordinator is required to act as the specialized coordinator of interfaces both within mechanical/electrical work and between that work and other trades.

1.05 COORDINATION DRAWINGS AND SUBMISSION

A. Prepare coordination drawings where required before beginning fabrication or delivery of materials and equipment to the Project site.

1. Coordination drawings shall clearly indicate coordination of mechanical, plumbing, fire protection, electrical, lighting, and equipment installations with structural, architectural, and finish elements.

2. Scale: ½" = 1'-0". Scale may be revised to ¼" = 1'-0" with consent of all involved subcontractors.

B. Keep copies of coordination drawings at the Project site.

C. Contractor shall provide the Owner with a record copy of initial coordination drawings, and with revisions to coordination drawings, within 3 working days of completion of each drawings or revised drawings and 30-days before work begins. The Owner will verify that coordination drawings have been made, but no approval of these drawings will be made. Include in submission of drawings the names of coordination staff.

D. Coordination drawings shall include, but are not limited to, structural, fire protection, plumbing, heating, ventilation and air conditioning, electrical power and lighting, security, life safety, telephone system, existing or reinstalled equipment, and new equipment.

E. Coordination drawings shall indicate layout of work for all trades, for purposes of showing overlays and potential conflicts of crossover work and adjoining work and for determining exact location and size of structural steel penetrations.

F. Continually revise coordination drawings as subsequent work is added to areas containing existing work.

G. Provide dimensions and elevations where conflicts may exist and coordinate conflicts on coordination drawings to prevent conflicts in the field.

H. Contractor shall require subcontractors to develop subcontractor coordination drawings of the same sale as Contractor's coordination drawings to assist in making transcripts for transfer to coordination drawings; use approved shop drawings for coordination drawings where available.

I. Coordination drawings shall include dates and signatures of Contractor and subcontractors involved in coordination; signed coordination drawings shall be subject to examination by the Owner at any time. Failure to maintain up-to-date drawings will be considered nonconformance with Contract Documents and progress payments will be withheld.

J. Failure of Contractor to provide adequate coordination and coordination drawings shall not be grounds for adjustment of Project cost or extension of time.

1.06 STRUCTURAL, MECHANICAL AND ELECTRICAL COORDINATION

A. Use coordination drawings of structural, mechanical, and electrical work together with shop drawings and layout drawings of affected work to check, coordinate and integrate the work to prevent interference.

B. Coordinate space requirements and installation of mechanical and electrical work indicated by graphic symbols on Contract Documents.

C. Routing shown for pipes, ducts, and conduits is shown by graphic symbols only; make runs parallel with building lines.

D. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.

E. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated. Coordinate locations of fixtures and outlets with finish elements.

F. Where there is potential conflict in the layout or interference between the work, including structural and architectural, layout the work with tape of other means to depict the layout on site to reduce or resolve the conflict and to allow the Owner to review the work prior to execution. The tape or other means to depict layout shall not cause any damage, change in color or appearance of any work to remain, or leave a residue.

G. Contractor shall coordinate steel shop drawings to include penetrations of framing members resulting from the coordination of and with the work of the mechanical and electrical subcontractors.

1. Steel shop drawings shall be reviewed and approved by the mechanical, electrical, and plumbing subcontractors prior to submission and fabrication.

1.07 INTERSTITIAL SPACE COORDINATION

A. Contractor shall provide coordination drawings for interstitial space to resolve installation conflicts prior to final approval of any shop drawings.

B. All conflicts shall be brought to the attention of the Owner.

C. Elements to include in the coordination drawings:

1. Mechanical ducts and pipes, including floor penetrations.

2. Plumbing pipes.

3. Fire branch lines and sprinkler heads.

4. Electrical bus ducts.

5. Telephone communication lines.

6. Interstitial space access.

7. Structural elements including but not limited to, beams, column, slabs, hangers, and seismic bracing.

8. Finished ceilings.

9. Insulation.

10. Others as required.

D. Schedule of Submission:

1. Refer to Coordination Drawings and Submission specified in this Section.

2. Review of the coordinated drawings shall be required prior to approval of any of the sub-system shop drawings for the elements listed above.

3. An as-built version of this drawing shall be required at the end of installation.

1.08 OWNER-FURNISHED ITEMS

A. Contractor shall coordinate scheduling and implementation of Owner-furnished items, including the submission of samples and shop drawings.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 GENERAL INSTALLATION PROVISIONS

A. General: The provisions in this Article are in addition to and are intended to supplement specific installation requirements specified in other Sections.

B. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

C. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

D. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.

E. Provide attachment and connection devices and methods necessary for securing work. Secure work true to line and level, unless otherwise required by Code or other Section of these Specifications. Allow for expansion and building movement.

F. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to the Architect for final decision.

G. Recheck measurements and dimensions, before starting each installation.

H. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

I. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

J. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect for final decision.

3.02 CLEANING AND PROTECTION

A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

END OF SECTION

SECTION 01312

PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section specifies administrative and procedural requirements for project meetings including but not limited to:

1. Pre-Construction Conference.
2. Pre-Installation Conferences.
3. Coordination Meetings.
4. Progress Meetings.

1.02 PRE-CONSTRUCTION CONFERENCE

A. Schedule a pre-construction conference and organizational meeting at the Project site no later than 15-days after execution of the Agreement and prior to commencement of construction activities. Conduct the meeting to review responsibilities and personnel assignments.

B. Contractor shall take and distribute meeting notes to the attendees. Attendees taking exception to any item on the meeting notes shall notify the Contractor within 3-days following receipt.

C. Attendees: The Owner's Representative, Architect and their consultants, the Contractor and its superintendent, major subcontractors, manufacturers, suppliers and other concerned parties shall each be represented at the conference by persons familiar with and authorized to conclude matters relating to the work.

D. Agenda: Discuss items of significance that could affect progress including such topics as:

1. Tentative construction schedule.
2. Critical work sequencing.
3. Designation of responsible personnel.
4. Procedures for processing field decisions and Change Orders.
5. Procedures for processing Applications for Payment.
6. Distribution of Contract Documents.
7. Submittal of Shop Drawings, Product Data and Samples.
8. Preparation of record documents.
9. Use of the premises.
10. Office, work and storage areas.
11. Equipment deliveries and priorities.
12. Safety procedures.
13. First aid.

14. Security.

15. Housekeeping.

16. Working hours.

1.03 PRE-INSTALLATION CONFERENCES

A. Conduct a pre-installation conference at the site before each construction activity that requires coordination with other construction. The Installer and representatives of manufacturers and fabricators involved in or affected by the installation, and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the Architect of scheduled meeting dates.

B. Review the progress of other construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for:

1. Contract Documents.

2. Options.

3. Related Change Orders.

4. Purchases.

5. Deliveries.

6. Shop Drawings, Product Data and quality control Samples.

7. Possible conflicts.

8. Compatibility problems.

9. Time schedules.

10. Weather limitations.

11. Manufacturer's recommendations.

12. Compatibility of materials.

13. Acceptability of substrates.

14. Temporary facilities.

15. Space and access limitations.

16. Governing regulations.

17. Safety.

18. Inspection and testing requirements.

19. Required performance results.

20. Recording requirements.

21. Protection.

C. Record significant discussions and agreements and disagreements of each conference, along with the approved schedule. Distribute the record of the meeting to everyone concerned, promptly, including the Owner and Architect.

D. Do not proceed if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of work and reconvene the conference at the earliest feasible date.

1.04 PROGRESS MEETINGS

A. Conduct progress meetings at the Project site at regularly scheduled intervals. Notify the Owner and Architect of scheduled meeting dates. Coordinate dates of meetings with preparation of the payment request.

B. Attendees: In addition to representatives of the Owner and Architect, each subcontractor, supplier or other entity concerned with current progress or involved in planning, coordination or performance of future activities shall be represented at these meetings by persons familiar with the Project and authorized to conclude matters relating to progress.

C. Agenda: Review and correct or approve minutes of the previous progress meeting. Review other items of significance that could affect progress, Include topics for discussion as appropriate to the current status of the Project.

D. Contractor's Construction Schedule: Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time, ahead, or behind schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

E. Review the present and future needs of each entity present, including such items as:

1. Interface requirements.
2. Time.
3. Sequences.
4. Deliveries.
5. Off-site fabrication problems.
6. Access.
7. Site utilization.
8. Temporary facilities and services.
9. Hours of work.
10. Hazards and risks.
11. Housekeeping.
12. Quality and work standards.
13. Change Orders.
14. Documentation of information for payment requests.

F. Reporting: Take and distribute copies of minutes of the meeting to each party present and to other parties who should have been present no later than 3-days after each progress meeting date. Include a brief summary, in narrative form, of progress since the previous meeting and report.

G. Schedule Updating: Revise the construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the report of each meeting.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01330

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 GENERAL

A. Timing:

1. Make submittals within the specified time.

2. Make submittals in advance of scheduled dates of installation to provide time for reviews, for securing necessary approvals, for possible revision and re-submittal, and for placing orders and securing delivery.

B. Identification:

1. Identify each submittal and re-submittal with the following information:

a. Project name and address as they appear in the Contract Documents.

b. Contract name.

c. Contractor's name and address.

d. Date of submission.

2. Identify each submittal with the following additional identification:

a. Contractor's stamp with initials or signature, certifying to review and approval of submittal, compliance with Contract Documents, and verification of field measurements.

b. Drawing and Specification Section numbers to which the submittal applies.

c. Subcontractor's or supplier's name and address.

d. Name and telephone number of the individual to contact for additional information regarding the submittal.

e. Whether it is an original submittal or a re-submittal.

f. Date of submission.

C. Coordination of Submittals:

1. General: Prior to submittal for Architect's or consultant's review, coordinate material, including the following procedures:

a. Determine and verify field dimensions and conditions, materials, catalog numbers, and similar data.

b. Coordinate as required with others providing work and public agencies involved.

c. Secure necessary approvals from public agencies and others and signify by stamp, or other means.

d. Unless otherwise specifically permitted by the Architect, make submittals in groups containing associated items.

D. Completeness: Submittals shall be complete. Partial submittals will be rejected for not complying with the provisions of the Contract Documents.

E. LEED Submittals: Comply with requirements specified in Division 1 Section LEED – Sustainable Design Requirements.

1.02 SCHEDULES

A. General: Submit required schedules prior to submitting first Application for Payment, unless otherwise specified.

B. Construction Schedule:

1. Submit DVC or CD disk and printout using Windows compatible computer-generated program from "Primavera Project Planner" or compatible system, such as "Microsoft Project Planner". Submit disk and printout no later than 15-calendar days after issuance of Notice to Proceed, for Owner's and Architect's review.

2. Form: Network diagram CPM, or other form acceptable to the Owner's Representative.

3. Maximum Sheet Size: 24-inches x 36-inches.

4. If Progress Schedule requires more than one sheet, submit summary sheet in addition.

5. Include subcontractors' input in formulating a realistic construction schedule.

6. Submittal schedule is a critical component of the construction schedule and is to be carefully integrated into it. Refer to Paragraph 1.02 E.

7. Content:

a. Complete sequence of construction by activity, with number of activities adequate to explain the various stages of construction.

b. Dated for beginning and completion of each major construction element.

c. Projected percentage of completion for each element, as of the first day of the month.

d. Activities shall be cost- and manpower-loaded.

e. Highlight all critical path activities.

8. Distribution; one copy each to:

a. Architect.

b. Owner.

c. Other concerned parties.

9. Updated Progress Schedule:

a. Submit updated disk and printout periodically, as appropriate to the progress of the work, but not less often than with each Application for Payment.

b. Furnish accompanying report as needed to explain changes.

c. Distribute copies as required for initial distribution.

C. Proposed Cash-Flow Schedule: Submit with Progress Schedule.

D. Schedule of Values:

1. Form and Content:

a. Type Schedule on 8-1/2-inch x 11-inch white paper; Contractor's standard forms and automated printout will be considered for approval upon request.

b. List the installed value of the component parts of the work broken down into sufficient detail to serve as a basis for computing values for progress payments during construction. For example, in the case of drywall work, identify components such as wood studs, wallboard, accessories, taping, and finishing.

c. Identify each line item with the number and title of the respective Specification Section.

d. For each major line item list sub-values of products or operations under the item.

e. For various portions of the work:

1) Include a separate line item for amount of the overhead and profit drawn on a monthly basis.

2) For portions of work in excess of ten thousand dollars ($10,000) in cost, identify labor and material costs.

f. The sum of values listed in the schedule plus overhead and profit shall equal the total Contract Sum.

2. Subschedule of Unit Material Costs:

a. Submit for stored products on which progress payments will be requested.

b. The form of submittal shall parallel that of the schedule of values, with each item identified the same as the line item in the schedule of values.

c. The unit quantity for bulk materials shall include an allowance for normal waste.

d. The unit values for the materials shall be broken down into:

1) Cost of the material, delivered and unloaded at the site, with applicable taxes paid.

2) Installation costs.

e. The installed unit value multiplied by the quantity listed shall equal the cost of that item in the schedule of values.

3. Distribution, one copy each to Architect and Owner.

E. Submittal Schedule: Include submittal date and realistic return date for each submittal required by the Contract Documents. No action will be taken on such submittals without prior receipt, review, and acceptance of Submittal Schedule. A minimum of 3 weeks shall be allowed for each submittal review. Four weeks shall be allowed for steel fabrications, casework, and HVAC ductwork reviews.

1. Submit within 15-calendar days after award of Contract, for the Architect's review and approval.

2. Distribution; one copy each to:

a. Architect.

b. Owner.

c. Other concerned parties.

3. Instruct recipients to promptly report problems anticipated by dates or sequences shown in the schedule.

1.03 REQUESTS FOR INFORMATION (RFI'S)

A. In the event a Contractor determines that some portion of the Contract Documents requires clarification or interpretation by the Architect, the Contractor shall submit a Request for Information (RFI) in writing to the Architect. Requests for information may only be submitted by the Contractor and shall only be submitted on the request for Information Forms furnished by the Architect. The Contractor shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed from the Architect. In the RFI, set forth an interpretation or understanding of the requirement along with reasons why such an understanding was reached. RFI's submitted direcly to the Architect by sub-contractors will not be responded to. The Contractor is responsible for coordinating all RFI's and shall keep an accurate log and record available for review by the Architect, Owner or their consultants, as applicable.

B. The Architect will review all RFI's to determine whether they are RFI's within the meaning of this term. If the Architect determines that the document is not an RFI request, it will be returned to the Contractor, un-reviewed as to content, for re-submittal on the proper form and in the proper manner.

C. Responses to RFI's will be issued within 5 working days of receipt unless the Architect determines that a longer time is required to provide an adequate response. If a longer time is determined to be required, the Architect will, within 5 working days of receipt of the request, notify the Contractor of the anticipated response time. If the Contractor submits a RFI on an activity with 5 working days or less of float on the current project schedule, the Contractor shall not be entitled to any time extension due to the time It takes the Architect to respond to the RFI provided the Architect responds within the 5 working days.

D. Responses from the Architect will not change any requirement of the Contract Documents. In the event the Contractor believes that a response to a RFI will cause a change to the requirements of the Contract Documents, the Contractor shall immediately give written notice to the Architect stating that the Contractor considers the response to be a Change Order. Failure to give such written notice immediately shall waive the Contractor's right to seek additional time or cost under the Changes article of the General Conditions.

E. The following definitions pertain to RFI's:

1. Drawing/Plan Clarification: An answer from the Architect in response to an inquiry from the Contractor, intended to make some requirement(s) of the drawings clearly understood. Drawing/plan clarifications may be sketches, drawings, or in narrative form and will not change any requirements of the drawings.

2. Non-Conformance Notice: A notice issued by the Architect documenting that the work or some portion thereof has not been performed in accordance with the requirements of the Contract Documents. Payment will not be made on any portion of the work for which a Non-Conformance Notice has been issued and the work not corrected to the Satisfaction of the Architect. Upon receipt of a Non-Conformance Notice, the Contractor shall provide a written response within 5 working days after receipt, noting why they believe the work was performed in accordance with the Contract Documents or what corrective action they intend to take to correct the non-conforming work. Written responses from the Contractor are not considered to be RFI's.

3. Project Communications: Routine written communications between the Architect and Contractor shall be in writing, field memo, e-mail, or FAX. Such communications shall not be identified as RFI's..

4. Requests for Information: A request from the Contractor seeking an interpretation or a clarification of some requirement of the Contract Documents. The Contractor shall clearly and concisely set forth the issue for which it seeks clarification or interpretation and why a response is needed. Include in the request interpretation or understanding of the contract's requirements along with documentation for the interpretation or understanding. Responses from the Architect will not change any requirements of the Contract Documents.

1.04 SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND OTHER SUBMITTALS

A. General:

1. Submit as required by the various Specification Sections. Do not submit shop drawings, product data, samples or other submittals unless specifically required.

2. For structural, mechanical, electrical, and plumbing submittals, submit directly to listed consultants with a copy of each transmittal to the Architect.

3. Submit in accordance with the accepted submittal schedule. Send copies of transmittals to the Owner.

4. Submit in the manner and quantities specified.

5. Allow a minimum of 15-working days for processing by the Architect and his Consultants, or the Owner's consultants, as applicable. Some submittals may require more processing time based upon consultant's input and the complexity of the submittal. Refer to Paragraph 1.02 E. If certain submittals are critical, they shall be identified at time of submission to assure priority review.

6. Allow the same minimum number of days for submittals marked "Revise and Resubmit" or "Rejected".

7. Neither the review or lack of review of any submittal shall waive any of the requirements of the Contract, or relieve the Contractor of any obligation thereunder.

8. Contractor shall carefully review each submittal for conformance with the Contract Documents prior to submitting to the Architect. If the Drawings are not in conformance, corrections will be made prior to submittal to the Architect. General contractor shall stamp and sign each drawings and submittal acknowledging that the submittal has been reviewed and has been found to be in conformance with the Contract Documents.

B. Shop Drawings:

1. Submit one reproducible and five black-line or blue-line prints to the Architect or his consultants, or the Owner's consultants, as applicable. Submit six copies of all product data. Submit two samples of all materials.

2. The Architect or his consultants, or the Owner's consultants, as applicable, will review the Shop Drawings; mark the reproducible with required revisions; and stamp and return the reproducible.

3. Review the returned reproducible and take appropriate action as indicated.

4. Revise and resubmit rejected submittals.

5. The Architect or his consultants, or the Owner's consultants, as applicable, will review the re-submittal and take action, as appropriate, in the same manner as for the original submittal.

6. As with the original submittal, Contractor shall review the returned reproducible and take appropriate action as indicated. Continue to resubmit and review until final action is taken by the Architect or his consultants, or the Owner's consultants, as applicable. Refer to Paragraph 1.04 B.8. for additional requirements.

7. Following final action by the Architect or his consultants, or the Owner's consultants, as applicable, make copies and distribute as required for accomplishment and inspection of the indicated work.

8. The Architect or his consultants, or the Owner's consultants, as applicable, may review at their discretion up to one resubmittal and take action, as appropriate, in the same manner as for the original submittal. If more than one resubmittal is required, any associated costs as a result of additional reviews shall be processed as a deductive Change Order in accordance with the General Conditions.

9. Only those Shop Drawings that bear stamps showing final review of the Contractor, Architect, and the Architect's consultants, or the Owner's consultants, as applicable, shall be used.

10. Reproduction and Mailing Costs: Pay the reproduction and mailing costs of the sepias and all prints.

C. Product Data:

1. Submit in the quantity required to be returned, together with two additional copies.

2. Review, processing, and distribution of Product Data will be the same as for Shop Drawings.

D. Samples:

1. Submit in the size specified in the individual Specification Sections, and in the quantity required to be returned, together with two additional Samples, which will be retained by the Architect or the Architect's consultants, or the Owner's consultants, as applicable.

2. Where Samples have natural variations in texture, color, or dimension, submit Samples showing the range of variation.

3. Ship samples to the Architect's or consultant's office, carriage prepaid. Samples to be returned will be returned to the Contractor COD.

E. Other Submittals: Submit as specified in the individual Specification Sections.

1.05 PATTERNS AND COLORS

A. Unless the exact pattern and color of a product are indicated in the Contract Documents, submit three accurate color and pattern charts to the Architect for review and selection.

1.06 CERTIFICATES OF COMPLIANCE

A. Submit certificates of compliance with the associated Shop Drawings, Product Data, and Samples required for the product.

B. Submit on 8-1/2-inch x 11-inch white paper.

C. Submit one copy.

D. The Architect will retain the certificates of compliance; no approval reply is intended.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01354

SUSTAINABLE DESIGN REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Other procurement documents and Division 1 apply to the work of this section.

1.2 SUMMARY

A. This section includes general requirements and procedures for compliance with certain USGBC LEED prerequisites and credits needed for Project to obtain LEED certification based on LEED-NC, Version 2.2, LEED-CI, Version 2.0, or LEED-CS, Version 2.0. While the City of Palm Springs wishes to construct a "green" building, due to budgetary considerations, it has opted not to retain a commissioning agent and not to formally apply for LEED certification at this time. Notwithstanding this decision, the City wishes to follow the guidelines set up by LEED and to construct the facility as though LEED certification was being pursued. Towards this end, the drawings and specifications outline the procedures which the contractor is to follow. Included within the specification's appendix is the current LEED checklist which outlines the points which the CITY wishes to pursue.

1. Other LEED prerequisites and credits needed to obtain LEED certification depend on material selections and may not be specifically identified as LEED requirements. Compliance with requirements needed to obtain LEED prerequisites and credits may be used as one criterion to evaluate substitution requests and comparable product requests.

2. Additional LEED prerequisites and credits needed to obtain the indicated LEED certification depend on Architect's design and other aspects of Project that are not part of the Work of the Contract.

3. If retaining subparagraph below, attach a copy of the LEED checklist to the end of this Section as information for Contractor.

B. Related Sections:

1. Divisions 01 through 33 Sections for LEED requirements specific to the work of each of these Sections. Requirements may or may not include reference to LEED.

1.3 DEFINITIONS

A. Chain-of-Custody Certificates: Certificates signed by manufacturers certifying that wood used to make products was obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship." Certificates shall include evidence that manufacturer is certified for chain of custody by an FSC-FSC-accredited certification body.

B. LEED: Leadership in Energy & Environmental Design.

C. Rapidly Renewable Materials: Materials made from plants that are typically harvested within a 10-year or shorter cycle. Rapidly renewable materials include products made from bamboo, cotton, flax, jute, straw, sunflower seed hulls, vegetable oils, or wool.

D. Regional Materials: Materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.

E. Regionally Manufactured Materials: Materials that are manufactured within a radius of 500 miles from Project site. Manufacturing refers to the final assembly of components into the building product that is installed at Project site.

F. Regionally Extracted and Manufactured Materials: Regionally manufactured materials made from raw materials that are extracted, harvested, or recovered within a radius of 500 miles from Project site.

G. Recycled Content: The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

1. "Post-consumer" material is defined as waste material generated by households or by commercial, industrial, and institutional facilities in their role as end users of the product, which can no longer be used for its intended purpose.

   "Pre-consumer" material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind, or scrap generated in a process and capable of being reclaimed within the same process that generated it.

1.4 SUBMITTALS

A. General: Submit additional LEED submittals required by other Specification Sections.

B. LEED submittals are in addition to other submittals. If submitted item is identical to that submitted to comply with other requirements, submit duplicate copies as a separate submittal to verify compliance with indicated LEED requirements.

C. Project Materials Cost Data: Provide statement indicating total cost for materials used for Project. Costs exclude labor, overhead, and profit. Include breakout of costs for the following categories of items:

1. Furniture.
2. Plumbing.
3. Mechanical.
4. Electrical.
5. Specialty items such as equipment.
6. Wood-based construction materials.

D. LEED Action Plans: Provide preliminary submittals within seven days of date established for commencement of the Work, indicating how the following requirements will be met:

1. Credit MR 2.1 and Credit MR 2.2: Waste management plan complying with Division 01 Section "Construction Waste Management and Disposal."

2. Credit MR 4.1 and Credit MR 4.2: List of proposed materials with recycled content. Indicate cost, post-consumer recycled content, and pre-consumer recycled content for each product having recycled content.
3. Credit MR 5.1and Credit MR 5.2: List of proposed regional materials. Identify each regional material, including its source, cost, and the fraction by weight that is considered regional.
4. Credit MR 5.1and Credit MR 5.2: List of proposed regionally manufactured materials and regionally extracted and manufactured materials.

    a. Identify each regionally manufactured material, including its source and cost.
    b. Identify each regionally extracted and manufactured material, including its source and cost.
5. Credit EQ 3.1: Construction indoor-air-quality management plan.

E. LEED Progress Reports: Concurrent with each Application for Payment, submit reports comparing actual construction and purchasing activities with LEED action plans for the following:

1. Credit MR 2.1 and Credit MR 2.2: Waste reduction progress reports complying with Division 01 Section "Construction Waste Management and Disposal."
2. Credit MR 4.1 and Credit MR 4.2: Recycled content.
3. Credit MR 5.1 and Credit MR 5.2: Regional materials.

F. LEED Documentation Submittals:

1. Credit MR 2.1 and Credit MR 2.2: Comply with Division 01 Section "Construction Waste Management and Disposal."

2. Credit MR 4.1 and Credit MR 4.2: Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.

3. Credit MR 5.1 and Credit MR 5.2: Product data for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

4. Credit EQ 3.1:

    a. Construction indoor-air-quality management plan.
    b. Product data for temporary filtration media.
    c. Product data for filtration media used during occupancy.
    d. Construction Documentation: Six photographs at three different times during the construction period, along with a brief description of the SMACNA approach employed, documenting implementation of the indoor-air-quality management measures, such as protection of ducts and on-site stored or installed absorptive materials.

5. Credit EQ 3.2:

a. Signed statement describing the building air flush-out procedures including the dates when flush-out was begun and completed and statement that filtration media was replaced after flush-out.
b. Product data for filtration media used during flush-out and during occupancy.
c. Report from testing and inspecting agency indicating results of indoor-air-quality testing and documentation showing compliance with indoor-air-quality testing procedures and requirements.

6. Credit EQ 4.1: Product data for adhesives and sealants used inside the weatherproofing system indicating VOC content of each product used. Indicate VOC content in g/L calculated according to 40 CFR 59, Subpart D.

1.5 QUALITY ASSURANCE

A. LEED Coordinator: Engage an experienced LEED-Accredited Professional to coordinate LEED requirements. LEED coordinator may also serve as waste management coordinator.

PART 2 - PRODUCTS

2.1 RECYCLED CONTENT OF MATERIALS

A. Credit MR 4.1 and Credit MR 4.2: Provide building materials with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 20 percent of cost of materials used for Project.

1. Cost of post-consumer recycled content of an item shall be determined by dividing weight of post-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
2. Cost of pre-consumer recycled content of an item shall be determined by dividing weight of pre-consumer recycled content in the item by total weight of the item and multiplying by cost of the item.
3. Do not include furniture, plumbing, mechanical and electrical components, and specialty items such as elevators and equipment in the calculation.

2.2 REGIONAL MATERIALS

A. Credit MR 5: Provide a minimum of 10 percent of materials (by cost) that are regionally extracted and manufactured materials.

2.3 LOW-EMITTING MATERIALS

A. Credit EQ 4.1: For field applications that are inside the weatherproofing system, use adhesives and sealants that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D:

1. Wood Glues: 30 g/L.
2. Metal to Metal Adhesives: 30 g/L.
3. Adhesives for Porous Materials (Except Wood): 50 g/L.
4. Subfloor Adhesives: 50 g/L.
5. Plastic Foam Adhesives: 50 g/L.

6. Carpet Adhesives: 50 g/L.
7. Carpet Pad Adhesives: 50 g/L.
8. VCT and Asphalt Tile Adhesives: 50 g/L.
9. Cove Base Adhesives: 50 g/L.
10. Gypsum Board and Panel Adhesives: 50 g/L.
11. Rubber Floor Adhesives: 60 g/L.
12. Ceramic Tile Adhesives: 65 g/L.
13. Multipurpose Construction Adhesives: 70 g/L.
14. Fiberglass Adhesives: 80 g/L.
15. Contact Adhesive: 80 g/L.
16. Structural Glazing Adhesives: 100 g/L.
17. Wood Flooring Adhesive: 100 g/L.
18. Structural Wood Member Adhesive: 140 g/L.
19. Special Purpose Contact Adhesive (contact adhesive that is used to bond melamine covered board, metal, unsupported vinyl, Teflon, ultra-high molecular weight polyethylene, rubber or wood veneer 1/16 inch or less in thickness to any surface): 250 g/L.
20. Top and Trim Adhesive: 250 g/L.
21. Plastic Cement Welding Compounds: 250 g/L.
22. ABS Welding Compounds: 325 g/L.
23. CPVC Welding Compounds: 490 g/L.
24. PVC Welding Compounds: 510 g/L.
25. Adhesive Primer for Plastic: 550 g/L.
26. Plastic Cement Welding Compounds: 350 g/L.
27. ABS Welding Compounds: 400 g/L.
28. CPVC Welding Compounds: 490 g/L.
29. PVC Welding Compounds: 510 g/L.
30. Adhesive Primer for Plastic: 650 g/L.
31. Sheet Applied Rubber Lining Adhesive: 850 g/L.
32. Aerosol Adhesive, General Purpose Mist Spray: 65 percent by weight.
33. Aerosol Adhesive, General Purpose Web Spray: 55 percent by weight.
34. Special Purpose Aerosol Adhesive (All Types): 70 percent by weight.
35. Other Adhesives: 250 g/L.
36. Architectural Sealants: 250 g/L.
37. Nonmembrane Roof Sealants: 300 g/L.
38. Single-Ply Roof Membrane Sealants: 450 g/L.
39. Other Sealants: 420 g/L.
40. Sealant Primers for Nonporous Substrates: 250 g/L.
41. Sealant Primers for Porous Substrates: 775 g/L.
42. Modified Bituminous Sealant Primers: 500 g/L.
43. Other Sealant Primers: 750 g/L.

B. Credit EQ 4.2: For field applications that are inside the weatherproofing system, use paints and coatings that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D and the following chemical restrictions:

1. Flat Paints, Coatings, and Primers: VOC not more than 50 g/L.
2. Nonflat Paints, Coatings, and Primers: VOC not more than 150 g/L.
3. Anticorrosive and Antirust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
4. Clear Wood Finishes, Varnishes: VOC not more than 350 g/L.
5. Clear Wood Finishes, Lacquers: VOC not more than 550 g/L.
6. Floor Coatings: VOC not more than 100 g/L.
7. Shellacs, Clear: VOC not more than 730 g/L.
8. Shellacs, Pigmented: VOC not more than 550 g/L.
9. Stains: VOC not more than 250 g/L.
10. Flat Interior Topcoat Paints: VOC not more than 50 g/L.
11. Nonflat Interior Topcoat Paints: VOC not more than 150 g/L.
12. Anticorrosive and Antirust Paints Applied to Ferrous Metals: VOC not more than 250 g/L.
13. Clear Wood Finishes, Varnishes and Sanding Sealers: VOC not more than 350 g/L.

14. Clear Wood Finishes, Lacquers: VOC not more than 550 g/L.
15. Floor Coatings: VOC not more than 100 g/L.
16. Shellacs, Clear: VOC not more than 730 g/L.
17. Shellacs, Pigmented: VOC not more than 550 g/L.
18. Stains: VOC not more than 250 g/L.
19. Primers, Sealers, and Undercoaters: VOC not more than 200 g/L.
20. Dry-Fog Coatings: VOC not more than 400 g/L.
21. Zinc-Rich Industrial Maintenance Primers: VOC not more than 340 g/L.
22. Pretreatment Wash Primers: VOC not more than 420 g/L.
23. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
24. Restricted Components: Paints and coatings shall not contain any of the following:

    a. Acrolein.
    b. Acrylonitrile.
    c. Antimony.
    d. Benzene.
    e. Butyl benzyl phthalate.
    f. Cadmium.
    g. Di (2-ethylhexyl) phthalate.
    h. Di-n-butyl phthalate.
    i. Di-n-octyl phthalate.
    j. 1,2-dichlorobenzene.
    k. Diethyl phthalate.
    l. Dimethyl phthalate.
    m. Ethylbenzene.
    n. Formaldehyde.
    o. Hexavalent chromium.
    p. Isophorone.
    q. Lead.
    r. Mercury.
    s. Methyl ethyl ketone.
    t. Methyl isobutyl ketone.
    u. Methylene chloride.
    v. Naphthalene.
    w. Toluene (methylbenzene).
    x. 1,1,1-trichloroethane.
    y. Vinyl chloride.

PART 3 - EXECUTION

3.1 **REFRIGERANT AND CLEAN-AGENT FIRE-EXTINGUISHING-AGENT** REMOVAL

A. Prerequisite EA 3: Remove CFC-based refrigerants from existing HVAC&R equipment indicated to remain and replace with refrigerants that are not CFC based. Replace or adjust existing equipment to accommodate new refrigerant as described in Division 23 Sections.

B. Credit EA 4: Remove clean-agent fire-extinguishing agents that contain HCFCs or halons and replace with agent that does not contain HCFCs or halons. See Division 21 Section "Clean-Agent Fire Extinguishing Systems" for additional requirements.

3.2 CONSTRUCTION WASTE MANAGEMENT

A. Credit MR 2.1 and Credit MR 2.2: Comply with Division 01 Section CLEANING AND WASTE MANAGEMENT.

3.3 CONSTRUCTION INDOOR-AIR-QUALITY MANAGEMENT

A. Credit EQ 3 EQ 3.1: Comply with "SMACQNA IAQ Guideline for Occupied Buildings under Construction."

1. If Owner authorizes use of permanent heating, cooling, and ventilating systems during construction period as specified in Division 01 Section "Temporary Facilities and Controls," install filter media having a MERV 8 according to ASHRAE 52.2 at each return-air inlet for the air-handling system used during construction.

Replace all air filters immediately prior to occupancy filter media having a MERV 13.

B. Credit EQ 3.2: Comply with one of the following requirements:

1. After construction ends, prior to occupancy and with all interior finishes installed, perform a building flush-out by supplying a total volume of 14000 cu. ft. of outdoor air per sq. ft. of floor area while maintaining an internal temperature of at least 60 deg F and a relative humidity no higher than 60 percent.

2. If occupancy is desired prior to flush-out completion, the space may be occupied following delivery of a minimum of 3500 cu. ft. of outdoor air per sq. ft. of floor area to the space. Once a space is occupied, it shall be ventilated at a minimum rate of 0.30 cfm per sq. ft. of outside air or the design minimum outside air rate determined in EQ Prerequisite 1, whichever is greater. During each day of the flush-out period, ventilation shall begin a minimum of three hours prior to occupancy and continue during occupancy. These conditions shall be maintained until a total of 14000 cu. ft./sq. ft. of outside air has been delivered to the space.

3. Air-Quality Testing:

a. Conduct baseline indoor-air-quality testing, after construction ends and prior to occupancy, using testing protocols consistent with the EPA's "Compendium of Methods for the Determination of Air Pollutants in Indoor Air," and as additionally detailed in the USGBC's "LEED-NC LEED-CI: Reference Guide."

b. Demonstrate that the contaminant maximum concentrations listed below are not exceeded:

1) Formaldehyde: 50 ppb.
2) Particulates (PM10): 50 micrograms/cu. m.
3) Total Volatile Organic Compounds (TVOC): 500 micrograms/cu. m.
4) 4-Phenylcyclohexene (4-PH): 6.5 micrograms/cu. m.
5) Carbon Monoxide: 9 ppm and no greater than 2 ppm above outdoor levels.

c. For each sampling point where the maximum concentration limits are exceeded, conduct additional flush-out with outside air and retest the specific parameter(s) exceeded to indicate the requirements are achieved. Repeat procedure until all requirements have been met. When retesting noncomplying building areas, take samples from same locations as in the first test.

d. Air-sample testing shall be conducted as follows:

1) All measurements shall be conducted prior to occupancy but during normal occupied hours, and with building ventilation system starting at the normal daily start time and operated at the minimum outside air flow rate for the occupied mode throughout the duration of the air testing.
2) Building shall have all interior finishes installed including, but not limited to, millwork, doors, paint, carpet, and acoustic tiles. Nonfixed furnishings such as workstations and partitions are encouraged, but not required, to be in place for the testing.
3) Number of sampling locations will vary depending on the size of building and number of ventilation systems. For each portion of building served by a separate ventilation system, the number of sampling points shall not be less than one per 25,000 sq. ft. or for each contiguous floor area, whichever is larger, and shall include areas with the least ventilation and greatest presumed source strength.
4) Air samples shall be collected between 3 and 6 feet from the floor to represent the breathing zone of occupants, and over a minimum four-hour period.

END OF SECTION

SECTION 01400 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and -control procedures that facilitate compliance with the Contract Document requirements.
2. Requirements for Contractor to provide quality-assurance and -control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

C. See Divisions 2 through 16 Sections for specific test and inspection requirements.

1.2 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Approved mockups establish the standard by which the Work will be judged.

D. Laboratory Mockups: Full-size, physical assemblies that are constructed at testing facility to verify performance characteristics.

E. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.

F. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

G. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.

H. Field Quality-Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.

I. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

J. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

K. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.3 CONFLICTING REQUIREMENTS

A. General: 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 Architect for a decision before proceeding.

B. Minimum Quantity or Quality Levels: 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 Architect for a decision before proceeding.

1.4 SUBMITTALS

A. Qualification Data: For testing agencies specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Reports: Prepare and submit certified written reports that include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.
6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Record of temperature and weather conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

C. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.5 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirement for specialists shall not supersede building codes and regulations governing the Work.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.
2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's approval of mockups before starting work, fabrication, or construction.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

J. Laboratory Mockups: Comply with requirements of preconstruction testing and those specified in individual Sections in Divisions 2 through 16.

1.6 QUALITY CONTROL

A. Owner Responsibilities: Where quality-control services are indicated as Owner's responsibility, Owner will engage a qualified testing agency to perform these services.

1. Owner will furnish Contractor with names, addresses, and telephone numbers of testing agencies engaged and a description of types of testing and inspecting they are engaged to perform.
2. Costs for retesting and reinspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor.

B. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.

a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.

2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

C. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division 1 Section "Submittal Procedures."

D. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that replaced Work that failed to comply with the Contract Documents.

E. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
6. Do not perform any duties of Contractor.

F. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

G. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and -control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

1.7 SPECIAL TESTS AND INSPECTIONS

A. Special Tests and Inspections: Owner will engage a qualified testing agency or special inspector to conduct special tests and inspections required by authorities having jurisdiction as the responsibility of Owner, and as follows:

B. Special Tests and Inspections: Conducted by a qualified testing agency or special inspector as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:

1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
4. Submitting a final report of special tests and inspections at Substantial Completion, which includes a list of unresolved deficiencies.
5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
6. Retesting and reinspecting corrected work.

PART 2 - EXECUTION

2.1 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01400

SECTION 01430

MOCK-UPS

PART 1 – GENERAL

1.01 SUMMARY

A. Provide a freestanding exterior building mock-up as indicated on the Drawings to permit review of appearance, quality of workmanship, coordination, compatibility, and relationships with adjacent materials. Mock-up shall be constructed out of sequence, as a part of this Contract and will not be incorporated into the final building. The mock-up will stand through the completion of the exterior and serve as the standard for workmanship once it has been approved in writing by the Architect.

B. Provide a full size room mock-up within the building. For purposes of this Project, Feral #1, Room 326 will serve as the mock-up. Room mock-up shall include all required floor, wall, and ceilings finishes, casework, light fixtures, door(s) and frame(s), glazing, mechanical diffusers, and other required materials and finishes. Make necessary modifications until room mock-up is approved by the Architect. Mock-up shall be constructed out of sequence, as a part of this Contract. Upon approval, the room mock-up will be incorporated into the final completed Project.

C. Special Finishes Mock-ups: Provide special finishes mock-ups of the following materials in the specified rooms. Mock-ups shall show materials and workmanship to be expected in the completed work. Make necessary revisions as required until each special finishes mock-up is approved by the Architect. Approved mock-ups will be allowed to remain in place. Provide special finishes mock-ups of the following:

1. Resinous flooring (ERC) specified in Section 09676. Provide in Feral #1, Room 326.

2. Resilient sheet flooring specified in Section 09654. Provide in Dressing Room, Room 315.

1.02 SUBMITTALS

A. Mock-ups shall not be fabricated until after acceptance of required submittals for all materials to be incorporated into the mock-ups. This means that the Project schedule shall take into account early submittal of these components to the Architect.

B. Shop Drawings: Submit shop drawings inclusive of all components, footings, and bracing. Clearly identify components and materials to be integrated into the assembly.

C. Samples: Prior to construction of mock-ups, provide samples as specified in the respective Specification Sections included as part of the mock-ups.

D. Structural Calculations: Submit structural calculations as required to insure the structural integrity of the mock-up. The calculations shall be signed by a licensed California structural or civil engineer and shall be submitted to the Architect for review.

1.03 QUALITY ASSURANCE

A. Design Concept: Mock-up requirements are intended to establish function, workmanship, finish, and color for conformance with the architectural design intent.

B. Purpose: To verify suitability of colors, finishes and satisfactory integration of building materials and components indicated and required.

C. Performance: Mock-ups shall be constructed for the Architect's review for compliance with the Contract Documents and shall be used as a standard for the final installation.

D. Make necessary additions and modifications to mock-ups as directed by the Architect.

E. Modify mock-ups, or construct or install new components if requested by the Architect, until final acceptance is obtained.

F. Work of this Section shall serve as the standard for subsequent work of like kind after approval by the Architect. Be prepared, at no additional cost to the Owner, to make as many modifications as required to achieve mock-ups that are acceptable to the Architect and of sufficient quality to serve as the standard for the complete Project.

G. Following acceptance, mock-ups shall serve as a performance standard of quality and appearance of the work it represents, including the interface with adjacent materials and components as applicable.

H. Coordinate fabrication, delivery, assembly, and installation with related materials to be included in the mock-ups. Construction of the mock-up assemblies shall be under the supervision of the same personnel who will be employed for the subsequent work.

I. Maintain mock-ups in neat, clean condition until removal or final acceptance. Repair damage as required to maintain in condition suitable for review and approval.

J. Approved building mock-up shall be removed from the Project site when directed by the Architect. Approved room mock-up may be incorporated into the work.

1. Remove and clear area after approval of the field mock-up only as directed by the Architect.

K. Scheduling:

1. Construct mock-ups in a timely manner to permit review and modifications such that the work is not delayed.

2. Do not proceed with ordering of components or construction subject to mock-up approval until after approvals have been obtained.

3. Provide the Architect not less than 10 working days notice of the time each component is ready for review.

4. Include line item in the construction schedule for the building section mock-up, showing submittals, construction, review, and approval periods.

PART 2 – PRODUCTS

2.01 MATERIALS

A. As specified in the respective Sections of the Specifications.

2.02 EXTERIOR BUILDING MOCK-UP

A. Provide a freestanding building mock-up section of building area indicated on the Drawings.

B. Purpose: Establish standards for work indicated and specified to be included in mock-up to demonstrate quality of workmanship, materials, colors, and textures required by the Contract Documents. Include windows, sealants, siding, flashing, and other exterior materials.

1. Mock-up will be used by the Architect to test color and material alternatives and to approve final colors, textures and workmanship. A maximum of 5 different colors may be tested as the mock-up for each component at no additional cost to the Owner

2. Interior finishes will not be required to be installed on the exterior building mock-up.

C. Design Concept: Engineer and construct mock-up, including required shoring, bracing, foundations, power, etc., making required additions and modifications to details as required.

1. Comply with performance requirements specified in the individual Specification Sections while maintaining basic design concept, member profiles, and alignment of components.

D. Location: As indicated on the Drawings.

2.03 ROOM MOCK-UP

A. Room 315 and 326 are the designated interior mock-up room. Room mock-up shall include all required floor, wall, and ceilings finishes, casework, light fixtures, door(s) and frame(s), glazing, mechanical diffusers, and other materials and finishes.

B. Purpose: Establish standards for work indicated and specified to be included in mock-up to demonstrate quality of workmanship, materials, colors, finishes, and textures required by the Contract Documents.

1. Mock-up will be used by the Architect to test color and material alternatives and to approve final colors, textures and workmanship. Up to 7 colors may be tested for each component as part of the mock-up.

END OF SECTION

SECTION 01450

QUALITY CONTROL

PART 1 - GENERAL

1.01 DEFINITIONS

A. Soils Engineer: A civil engineer, licensed in the State of California, retained and paid by the Owner to perform services as specified.

B. Testing Laboratory: An independent commercial testing organization, retained and paid by the Owner to perform tests and report on work as specified and as required.

1.02 SOILS ENGINEER

A. Services of a Soils Engineer are required for work specified in other Sections.

1.03 TESTING LABORATORY

A. General: Services of a Testing Laboratory are required for work specified in other Sections.

B. Contractor's Responsibilities:

1. Cooperate with Testing Laboratory personnel.

2. Secure and deliver to the Testing Laboratory adequate quantities of representational samples of materials proposed for use for which testing is required.

3. Furnish copies of product test reports as required.

4. Furnish incidental labor and facilities:

a. To provide access to work to be tested.

b. To obtain and handle samples at the Project site or at the source of the product to be tested.

c. To facilitate inspections and tests.

d. For storage and curing of test samples.

5. Notify the Owner's Representative sufficiently in advance of operations to allow for Testing Laboratory assignment of personnel and scheduling of tests.

a. When tests or inspections cannot be performed after such notice, reimburse the Owner for the Testing Laboratory personnel and travel expenses incurred.

1.04 TEST REPORTS

A. The Testing Laboratory will distribute reports as follows:

1. Architect: One copy.

2. Applicable Consultant: One copy.

3. Owner: One copy.

4. Number of copies for Contractor and supplier will be determined upon commencement of the work.

5. Owner and state agencies as appropriate.

1.05 RETESTING

A. If the Architect has reasonable doubt that materials comply with Specification requirements, additional tests shall be made as directed.

1. If additional tests establish that materials comply with Specification requirements, costs for such tests will be paid by the Owner.

2. If additional tests establish that materials do no comply with Specification requirements, costs for such tests shall be paid by the Contractor.

B. The Contractor is responsible for retesting where results of required inspections, tests or similar services prove unsatisfactory and do not indicated compliance with the Contract Documents.

1. Cost of retesting shall be paid for by the Contractor.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01500

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Furnish, install, and maintain temporary utilities as required to perform the work.

B. Materials, installation, and maintenance of temporary utilities shall be in compliance with applicable regulatory requirements.

C. Remove temporary utilities, including associated materials and equipment when no longer required. Restore and recondition areas of the site damaged or disturbed by temporary utilities or their installation. Remove and properly dispose of debris resulting from removal and reconditioning operations.

1.02 TEMPORARY UTILITIES

A. Temporary Electric Power and Lighting:

1. Arrange with electric utility service company to provide service for power and lighting. Pay the costs for service and for power used.

2. Distribute electric power and lighting.

3. Provide lighting and convenience outlets in the temporary structures, and as otherwise required for the performance of the work.

B. Temporary Heat and Ventilation: Pay the costs of installation, maintenance, operation, and removal of temporary heat and ventilation, including costs for fuel consumed, required for the performance of the work. If permanently installed equipment is used, do not operate without filters, and replace filters and clean grills and registers before Contract Closeout.

C. Temporary Water:

1. Arrange with utility service company to provide temporary water service and distribution; pay the costs for service and for water used.

2. Following permanent service installation, temporary water may be taken from permanent source.

3. Install branch piping with taps located so that water for construction purposes is available throughout the work by the use of hoses.

4. Make potable water available for human consumption.

D. Temporary Sanitary Facilities: Locate as approved by the Owner. Maintain in a neat, sanitary condition, adequately supplied.

E. Temporary Telephone Service:

1. Arrange with local telephone service company for the following telephone service for use of construction personnel and employees.

a. One telephone and dedicated FAX machine line in Contractor's field office.

b. Other telephones, including coin-operated telephone for general use, at the option of the Contractor, or as required by regulatory requirements.

2. Pay costs for telephone installation, maintenance, service, and removal.

F. Temporary Fire Protection: Provide and maintain fire extinguishers, fire hoses, and other equipment necessary for proper fire protection during the progress of the work. Equipment shall be designed for fire protection only.

1.03 CONSTRUCTION AIDS

A. Plant and Equipment:

1. Furnish, operate, and maintain a complete plant for fabricating, handling, conveying, installing, and erecting work and materials required under the Contract. Include hoists and conveyances for transporting workers and transporting and placing materials; debris chutes; and tools, appliances, power equipment, and other required items. Furnish, arrange, and set up the plant to facilitate the proper and timely performance of the work.

2. Maintain plant and equipment in safe operating condition. Repair damages due to the use of defective plant and equipment, at no increase in Contract Sum.

1.04 BARRIERS AND ENCLOSURES

A. Provide and maintain suitable temporary barriers as required to prevent public entry; protect the work and existing facilities, persons, and trees and plants from damage or injury from construction operations.

B. Tree and Plant Protection:

1. Preserve and protect existing trees and plants not designated or required to be removed, and those adjacent to the site.

2. Consult with the Owner's Representative prior to removal of roots and branches that interfere with construction operations.

3. Provide barriers to a minimum height of 6'-0" around each tree and plant, or around groups in the proximity of construction operations.

4. Prohibit vehicular traffic or parking, storage of materials or products, prevent dumping of refuse or chemically injurious materials or liquids or ponding or continuous running water within drip lines.

5. Supervise excavating, grading, and filling, and subsequent operations to prevent damage.

6. Replace, or suitably repair trees and plants designated to remain that are damaged or destroyed as a result of construction operations, at no increase in Contract Sum.

7. Remove and replace soil that has been contaminated during the performance of the work by materials harmful to trees and plants, at no increase in Contract Sum.

1.05 SECURITY

A. Secure, maintain, and protect the work, stored materials, equipment, and temporary facilities until time of acceptance, or such earlier time as Owner may choose to assume such responsibility.

B. Install temporary enclosure of partially completed construction areas to prevent unauthorized entrance, vandalism and theft.

C. Secure temporary storage areas as required to prevent theft.

1.06 TEMPORARY CONTROLS

A. Noise and Vibration Control:

1. Comply with applicable regulatory requirements for the operation of powered construction equipment.

2. Equipment and impact tools shall have intake and exhaust mufflers.

3. Secure written permission from Owner at least three working days prior to using noisy and vibratory equipment, such as jack-hammers, concrete saws, impact tools, and high frequency electrical equipment.

4. Cooperate with Owner if the use of noisy equipment becomes objectionable.

B. Dust and Dirt Control:

1. Conduct construction operations to prevent windblown dust and dirt from interfering with the progress of the work.

2. Periodically water exterior construction areas as required to minimize the generation of dust and dirt.

3. Hauling equipment and trucks carrying loads of soil and debris shall have their loads sprayed with water or covered with tarpaulins.

4. Prevent dust and dirt from accumulating on walks, roadways, parking areas, and planting, and from washing into sewer and storm drains.

5. Also see Article 19 – Dust Control, Volume I Supplementary General Conditions for additional requirements.

C. Water Control: Do not permit surface or subsurface water, and other liquids to accumulate on or in areas adjacent to the Project site. Should such conditions be encountered or develop, control the water, or other liquid, and suitably dispose of by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, or other methods.

D. Pollution Control:

1. No burning of refuse, debris, or other materials will be permitted on or in the vicinity of the Project site.

2. Comply with regulatory requirements and anti-pollution ordinances during the performance of demolition, construction and disposal operations.

1.07 PROJECT IDENTIFICATION AND SIGNS

A. Provide and maintain a Project identification sign of the size, design, text, and colors designated by the Architect; locate sign as directed.

B. Signs other than the specified Project sign will not be permitted, unless otherwise approved in advance by the Owner.

C. Materials:

1. Structure and Framing: Structurally sound, new or used wood or metal; wood shall be nominal 2-inch x 4-inch minimum size.

2. Sign Surface: Minimum 3/4-inch exterior grade plywood.

3. Rough Hardware: Galvanized.

D. Fabrication:

1. Fabricate to provide smooth, even surface for painting.

2. Size: As indicated or directed.

3. Paint exposed surfaces of supports, framing, and surface material with one coat of primer and one coat of finish paint.

4. Text and Graphics: As directed by the Architect.

1.08 FIELD OFFICES AND SHEDS

A. Furnish, install, and maintain field offices and sheds.

B. No existing facilities at the Project site will be available for use for field offices or storage.

C. Construct, install, and maintain field offices and sheds in compliance with applicable regulatory requirements.

D. Construction shall be structurally sound, weathertight, with floors raised above the ground, sturdy doors with provisions for locking, temperature transmission resistance compatible with occupancy and storage requirements, and neat appearance maintained throughout duration of work.

E. Portable or mobile buildings complying with the specified requirements may be used.

F. Obtain Owner's approval of locations for field offices and storage sheds prior to commencing site preparation for the structures.

G. Construct field offices and sheds on proper foundations, and provide connections for utility services. Fill and grade sites for field offices and storage sheds to facilitate surface drainage.

H. Field office shall contain a lockable office for use by the Architect and Owner's Representative or a separate structure shall be provided. The office shall contain a table and two chairs and shall be accessible even when the construction site is locked-up. Provide a separate lockable entrance and separate from the field office if required.

I. Remove field offices and sheds from the site as soon as the progress of the work permits. Remove foundations, steps, landings, utility services and contents. Grade and restore portions of the site occupied by the temporary structures.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01600

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Material and equipment incorporated in the work shall be:

1. New, unless otherwise specified.
2. In a condition acceptable to the Architect.
3. Suitable for the intended use.
4. In conformance with EPA codes and regulations and applicable air quality control district.

B. No material or equipment shall be used for purposes other than that for which designed or specified.

C. No material shall contain asbestos.

D. No materials or products shall contain formaldehyde in excess of the amount recommended by applicable department of health, or other regulatory agencies.

1.02 TRANSPORTATION AND HANDLING

A. Deliver manufactured products in the manufacturers' original unbroken containers or packaging, with identifying labels intact and legible.

B. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and reviewed submittals, and verify that products are properly protected and undamaged.

C. Handle products and packages in a manner to avoid soiling or damaging.

D. Promptly remove damaged or defective products from the site, and replace at no increase in Contract Sum.

1.03 STORAGE

A. Store manufactured products in accordance with the manufacturer's instructions, with seals and labels intact and legible.

1. Store products subject to damage by the elements in weathertight enclosures.
2. Maintain temperature and humidity within the ranges specified by the manufacturers.

B. Exterior Storage:

1. Store fabricated products above the ground, on blocking or skids, to prevent soiling and staining.
2. Cover products subject to deterioration with impervious sheet coverings; provide adequate ventilation to avoid condensation.
3. Store loose granular material in a well drained area on solid surfaces to prevent mixing with foreign matter.

C. Arrange storage to facilitate inspection.

D. Periodically inspect stored products to assure that specified conditions are maintained and the products are free from damage or deterioration.

E. Protection after Installation:

1. Provide coverings necessary to protect installed products from damage due to traffic or construction operations. Remove coverings when no longer needed.

2. Maintain temperature and humidity conditions for interior equipment and finish products in accordance with the manufacturers' instructions.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01630

PRODUCT SUBSTITUTION PROCEDURES

PART 1 – GENERAL

1.01 REQUIREMENTS INCLUDED

A. Furnish and install products specified, under options and conditions for substitutions stated in this Section.

1.02 PRODUCTS LIST

A. Submit six copies of complete list of major products which are proposed for installation.

B. Tabulate products by Specification Section number and title.

C. For products specified only by reference standards, list for each such product:

1. Name and address of manufacturer.

2. Trade name.

3. Model or catalog designation.

4. Manufacturer's data:

a. Reference standards.

b. Performance test data.

1.03 CONTRACTOR'S OPTIONS

A. For products specified only by reference standard, select product meeting that standard, by any manufacturer.

B. For products specified by naming several products or manufacturers, select any one of products and manufacturers named which complies with Specification.

C. For products specified by naming one or more products or manufacturers, submit a request as for substitutions, for any product or manufacturer which is not specifically named.

D. Wherever catalogue numbers and specific brands or trade names are listed as the only product specified in conjunction with material or equipment required by the Specifications, no substitutions will be considered.

1.04 SUBSTITUTIONS

A. Catalog numbers and specific brands or trade names are used in conjunction wit material and equipment required by the Specifications to establish the standard of quality, utility, and appearance required. Substitutions which are equal in quality, utility, and appearance to those specified may be accepted subject to the following provisions:

1. All substitutions must be accepted in writing by the Architect.

2. The determination of the Architect after consultation with the Owner shall be final.

3. Contractor shall submit to the Architect, within 15 business days after the date of commencement specified in the Notice to Proceed, a typewritten list containing a description of each substitute material or equipment.

   a. After end of that period, a request of substitution will be considered only in case of product unavailability or other conditions beyond the control of Contractor.

   b. Product unavailability shall be verified in writing by manufacturer.

4. Failure of Contractor to submit proposed substitutions for approval in the manner described above and within the time prescribed shall be sufficient cause for disapproval by the Architect of any substitutions otherwise proposed.

5. Contractor shall provide supporting data required by Paragraph 1.04.B.

6. The Owner will accept, in writing, proposed substitutions that are in Architect's opinion equal in quality, utility, and appearance to the material or equipment specified.

7. Such acceptance shall not relieve Contractor from complying with the requirements of the Drawings and Specifications.

8. Contractor shall be responsible for all costs of any changes resulting from Contractor's proposed substitution which affect other parts of the work or the work of Separate Contractors, including the cost of the Architect's additional services, testing, permits thereby made necessary.

B. Requests for substitutions will only be considered if the Contractor submits the following:

1. Complete technical data including drawings, performance specifications, samples, and test reports of the article proposed for substitution; and any additional information required by the Architect or Owner's Representative.

2. Data described in Subparagraph B.1 for the specified item for which substitution is proposed.

3. Complete breakdown of costs, which shall include savings generated by the proposed substitution and shall indicate the amount, if any, to be deducted from the Contract Sum if the proposed substitution is accepted. Only substitutions that provide a credit to the Owner will be considered.

4. Statement by the Contractor that the proposed substitution is in full compliance with the requirements of the Contract Documents and Applicable Code Requirement.

5. List of other trades, if any, which may be affected by the substitution.

6. If the proposed substitution requires that portions of the Project be redesigned or construction be removed in order to accommodate the substituted item, submit design and engineering calculations prepared by a properly licensed design professional. The Contractor shall bear all costs resulting from the substitution.

C. Submit separate request for each substitution. Support each request with:

1. Complete data substantiating compliance of proposed substitution with requirements stated in Contract Documents.

   a. Product identification including manufacturer's name and address.

   b. Manufacturer's literature; identify:

      1) Products description.

      2) Reference standards.

      3) Performance and test data.

   c. Samples, as applicable.

   d. Name and address of similar projects on which product has been used, and date of each installation.

2. Itemized comparison of the proposed substitution with product specified; list significant variations.

3. Data relating to changes in construction schedule.

4. Any effect of substitution on separate contracts.

5. List of changes required on other work or products.

6. Accurate cost data comparing proposed substitution with product specified. Only substitutions that provide a credit to the Owner will be considered.

7. Designation of required license fees or royalties.

8. Designation of availability of maintenance services, sources of replacement materials.

9. Statement that substitution will not impact LEED credits.

D. Substitutions will not be considered for acceptance when:

1. They are indicated or implied on shop drawings or product data submittals without a formal request from Contractor.

2. They are requested directly by a subcontractor or supplier.

3. Acceptance will require substantial revision of Contract Documents.

4. Insufficient information is submitted.

E. Availability of Specified Items:

1. Verify prior to bidding that all specified items will be available in time for installation during orderly and timely progress of the work.

2. In the event specified item or items will not be so available, notify the Architect prior to receipt of bids.

3. Costs of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will be back-charged as necessary and shall not be borne by the Owner.

F. Substitutions shall be considered as a Change Order and be approved by the Owner prior to fabrication or use.

1.05 CONTRACTOR'S REPRESENTATION

A. In making a formal request for substitution, Contractor represents that:

1. He has investigated proposed product and has determined that it is equal to or superior in all respects to that specified.

2. He will provide same warranties for substitution as for product specified.

3. He will coordinate installation of accepted substitution into the work and will make such changes as may be required for the work to be complete in all respects.

4. He waives claims for additional costs caused by substitution which may subsequently become apparent.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01700 - EXECUTION REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:

1. Construction layout.
2. General installation of products.
3. Progress cleaning.
4. Starting and adjusting.
5. Protection of installed construction.
6. Correction of the Work.

B. See Division 1 Section "Closeout Procedures" for submitting final property survey with Project Record Documents, recording of Owner-accepted deviations from indicated lines and levels, and final cleaning.

PART 2 - EXECUTION

2.1 EXAMINATION

A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed. Before beginning work, investigate and verify the existence and location of mechanical and electrical systems and other construction affecting the Work.

1. Before construction, verify the location and points of connection of utility services.

B. Existing Utilities: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the Work.

1. Before construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, and water-service piping; and underground electrical services.
2. Furnish location data for work related to Project that must be performed by public utilities serving Project site.

C. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance. Record observations.

1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
2. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections before equipment and fixture installation.
3. Examine walls, floors, and roofs for suitable conditions where products and systems are to be installed.
4. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

2.2 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on Drawings.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents, submit a request for information to Architect. Include a detailed description of problem encountered, together with recommendations for changing the Contract Documents.

2.3 CONSTRUCTION LAYOUT

A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect promptly.

B. General: Engage a land surveyor and/or professional engineer to lay out the Work using accepted surveying practices.

1. Establish benchmarks and control points to set lines and levels at each story of construction and elsewhere as needed to locate each element of Project.
2. Establish dimensions within tolerances indicated. Do not scale Drawings to obtain required dimensions.
3. Inform installers of lines and levels to which they must comply.
4. Check the location, level and plumb, of every major element as the Work progresses.
5. Notify Architect when deviations from required lines and levels exceed allowable tolerances.
6. Close site surveys with an error of closure equal to or less than the standard established by authorities having jurisdiction.

C. Site Improvements: Locate and lay out site improvements, including pavements, grading, fill and topsoil placement, utility slopes, and invert elevations.

D. Building Lines and Levels: Locate and lay out control lines and levels for structures, building foundations, column grids, and floor levels, including those required for mechanical and electrical work. Transfer survey markings and elevations for use with control lines and levels. Level foundations and piers from two or more locations.

E. Record Log: Maintain a log of layout control work. Record deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used. Make the log available for reference by Architect.

2.4 INSTALLATION

A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.

1. Make vertical work plumb and make horizontal work level.
2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
3. Conceal pipes and wiring in finished areas, unless otherwise indicated.

B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.

C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

D. Conduct construction operations so no part of the Work is subjected to damaging operations or loading in excess of that expected during normal conditions of occupancy.

E. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.

F. Templates: Obtain and distribute to the parties involved templates for work specified to be factory prepared and field installed. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing products to comply with indicated requirements.

G. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.

1. Mounting Heights: Where mounting heights are not indicated, mount components at heights directed by Architect.
2. Allow for building movement, including thermal expansion and contraction.
3. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.

H. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.

I. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

2.5 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
2. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Remove liquid spills promptly.
2. Where dust would impair proper execution of the Work, clean the entire work area, as appropriate.

D. Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.

E. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.

F. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

G. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

H. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

I. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

J. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

2.6 STARTING AND ADJUSTING

A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units, replace with new units, and retest.

B. Adjust operating components for proper operation without binding. Adjust equipment for proper operation.

C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

D. Manufacturer's Field Service: If a factory-authorized service representative is required to inspect field-assembled components and equipment installation, comply with qualification requirements in Division 1 Section "Quality Requirements."

2.7 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

B. Comply with manufacturer's written instructions for temperature and relative humidity.

2.8 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes. Comply with requirements in Division 1 Section "Cutting and Patching."

1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching materials, and properly adjusting operating equipment.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

D. Repair components that do not operate properly. Remove and replace operating components that cannot be repaired.

E. Remove and replace chipped, scratched, and broken glass or reflective surfaces.

END OF SECTION 01700

SECTION 01722

FIELD ENGINEERING

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section specifies administrative and procedural requirements for field engineering services.

1.02 SUBMITTALS

A. Certificates: Certificate signed by land surveyor or engineering certifying that the location and elevation of improvements comply with Contract Documents.

B. Project Record Documents: Furnish a record of work performed and record survey data as specified in Sections 01330 and 01780.

1.03 QUALITY ASSURANCE

A. Surveyor: Engage a Registered Land Surveyor registered in the State of California, to perform land surveying services required.

B. Engineer: Engage a Professional Engineer of the discipline required, registered in the State of California to perform required engineering services.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 EXAMINATION

A. The Owner will identify existing control points and property line corner stakes.

B. Verify layout information indicated, in relation to the property survey and existing benchmarks before proceeding to layout the work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.

1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points, or requirements to relocate reference points because of necessary changes in grades or locations.

2. Promptly replace lost or destroyed project control points. Base replacements on the original survey control points.

3. Establish and maintain a minimum of two permanent benchmarks on the site, referenced to data established by survey control points.

C. Existing Utilities and Equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.

1. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer and water service piping.

3.02 PERFORMANCE

A. Working from lines and levels established by the property survey, establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to properly locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.

1. Advise entities engaged in construction activities, of marked lines and levels provided for their use.

2. As construction proceeds, check every major element for line, level and plumb.

B. Surveyor's Log: Maintain a surveyor's log of control and other survey work. Make this log available for reference.

1. Record deviations from required lines and levels, and advise the Owner's Representative when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.

2. Upon completion of foundation walls, major site improvements, and other work requiring field engineering services, prepare a certified survey showing dimensions, locations, angles and elevations of construction and sitework.

C. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes and invert elevations by instrumentation and similar appropriate means.

D. Building Lines and Levels: Locate and layout batter boards for structures, building foundations, column grids and locations, floor levels and control lines and levels required for mechanical and electrical work.

E. Existing Utilities: Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in, or affected by construction. Coordinate with local authorities having jurisdiction.

END OF SECTION

SECTION 01740

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Perform cleaning and disposal operations during the progress and completion of the work.

B. Cleaning for specific products or work is specified in the individual Specification Sections.

1.02 QUALITY ASSURANCE

A. Comply with applicable regulatory requirements during cleaning and disposal operations.

PART 2 - PRODUCTS

2.01 CLEANING MATERIALS

A. Use cleaning materials which will not create hazards to health or property or cause damage to products.

B. Use cleaning materials and methods recommended by the manufacturers of the products to be cleaned.

PART 3 - EXECUTION

3.01 CLEANING DURING CONSTRUCTION

A. Perform cleaning operations as required during construction to prevent accumulations of dust, dirt, soil, and debris.

3.02 DUST CONTROL

A. Clean interior spaces prior to the start of finish painting and the application of other finishes, and continue cleaning as required until such work is completed.

B. Schedule cleaning operations to prevent dust and other contaminants from adhering to wet or newly finished surfaces.

3.03 FINAL CLEANING

A. Remove dust, dirt, grease, stains, fingerprints, labels, spilled and spattered, and other materials from interior and exterior surfaces exposed to view.

B. Wash and shine glazing and mirrors.

C. Polish glossy surfaces to a clear shine.

D. Ventilating Systems: Clean permanent filters and replace disposable filters of units operated during construction. Clean ducts, blowers, and coils of units operated during construction.

E. Vacuum and wipe insides of electrical panels and cabinetwork.

F. Broom clean interior spaces.

G. Broom clean exterior paving.

H. Rake clean ground surfaces.

END OF SECTION

SECTION 01780

CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section describes the requirements for the following items of the Contract Closeout:

1. Project record documents.
2. Operating and maintenance data.
3. Instructions of Owner's personnel.
4. Service and maintenance contracts.
5. Preparation for final inspection.
6. Damage and restoration.
7. Remedial work.

B. Comply with the requirements of the General Conditions and Supplementary Conditions, and the individual Specification Sections for administrative procedures for closing out the work.

1.02 PROJECT RECORD DOCUMENTS

A. Maintenance of Documents and Samples:

1. Store Project documents and samples in field office apart from documents used for construction.
2. Maintain Project documents in a clean, dry, legible condition and in good order.
3. Do not use Project record documents for construction.

B. Recording:

1. Record information carefully and neatly, with felt tip pens, in color code designated, and in the manner approved in advance by the Architect.
2. Label each document "Project Record" in large, neat, printed letters.

C. Record Drawings:

1. Record the following kinds of information on black-line or blue-line prints:

a. Changes made by Change Orders and other modifications described in the General Conditions.

b. Locations of work buried under or outside the building, such as plumbing and electrical lines and conduits.

c. Locations of work concealed inside the building whose general location is changed from that shown on the Contract Documents.

d. Locations of items, not necessarily concealed, which have been changed, with the Architect's prior acceptance, from the locations indicated on the Contract Documents.

e. Locations of significant items such as main power disconnect, main water and gas shutoffs, motor disconnects, filters, controls, isolating valves and the like shall be highlighted on the record drawings.

f. In addition to the previously specified requirements for record drawings:

1) Keep up to date during the entire progress of the work, and make available to the Architect and Owner's Representative.

2) Furnish additional drawings necessary for clarification.

3) Record deviations from the sizes, locations, and other features of installations shown in the Contract Documents.

4) Establish locations of underground work by dimensions to column lines or walls, locating turns, and by referenced centerline or invert elevations and rates of fall.

5) Give sufficient information to locate work concealed in the Building.

6) Drawing to Scale:

a) Locate main runs of piping, conduit, ductwork, and similar items by dimensions.

b) Locate other items either by dimensions or in relation to spaces within the building.

2. Furnish reproducible record drawings, made from final Shop Drawings, updated to show actual conditions, for specified work.

D. "As-Built" Drawings:

1. At time of acceptance of the work and prior to final payment, using the record drawings for reference, prepare "As-Built" drawings on permanent, transparent, reproducible prints furnished by the Architect and paid for by the Owner.

2. Employ a professional draftsman to prepare the "As-Built" drawings from the record drawings; record information in ink.

E. Specifications and Addenda:

1. Mark each Specification Section to record:

a. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment incorporated in the work.

b. Changes made by Change Order and other modifications described in the General Conditions.

F. Large Scale Layout Drawings:

1. The preparation of large scale detailed layout drawings may be required for the work of Divisions 15 and 16 of the Specifications. These layout drawings are not Shop Drawings as defined by the General Conditions, but, together with Shop Drawings or layout drawings of affected Sections, are used to check, coordinate, and integrate the work of the various Sections.

2. If furnished, include the layout drawings as part of the Project record documents.

G. Record Construction Schedule: Using the latest Progress Schedule required by Section 01330 as a reference, submit a Record Construction Schedule showing the actual dates and duration of construction activities.

H. Sign and date the completed Project record documents; deliver to the Architect who will deliver to the Owner after final acceptance of the work.

1.03 PRODUCT DATA

A. Furnish three copies of manufacturers' product data, specifications, installation instructions, and maintenance instructions for products incorporated in the work; information specified herein shall be for products in addition to equipment items requiring operating and maintenance data specified elsewhere in this Section. All product data pertaining to an item shall be assembled together.

B. Sign and date the completed product data, and submit to the Architect, who will deliver them to the Owner.

1.04 OPERATION TESTS

A. Conduct operational tests as required to demonstrate that all systems have been completed and are in compliance with all requirements.

B. Furnish a written record of test results using recording type instruments where applicable and as directed.

1.05 OPERATING AND MAINTENANCE DATA

A. General: Where maintenance manuals, record data, and operating instructions are specified, assemble in three ring, plastic binders sized for 8-1/2-inch x 11-inch sheets; include the following:

1. Identification on, or readable through, the front cover containing the Project name and address and the general subject matter in the manual.

2. Typewritten index near the front of the manual indicating locations of emergency data for equipment included in the manual.

3. Instructions regarding operation and maintenance of the equipment included in the manual.

4. Replaceable parts, part numbers, cost, and name and address of nearest parts distributor.

5. Copy of each warranty and service contract issued for the equipment included in the manual.

6. Include additional data required for the Owner's operation and maintenance.

B. Catalog Data: Where contents of manuals include manufacturers' catalog pages, indicate the items included in the Project and delete data that is not applicable.

C. Shop Drawings: Furnish one set of reviewed Shop Drawings showing changes made during construction.

D. Number of Copies Required:

1. Submit manuals in the quantity required to be returned, plus the following to be retained by the Owner's Representative:

a. Four copies of Mechanical and Electrical Manuals.

b. Two copies of other manuals.

1.06 INSTRUCTION OF THE OWNER'S PERSONNEL

A. Where specified, furnish qualified personnel for on the job instruction of the Owner's operating and maintenance personnel.

B. Where possible, furnish instruction, including special start-ups and running time, prior to occupancy of the building, including special start-ups and running time, at no additional expense to the Owner.

1.07 SERVICE AND MAINTENANCE CONTRACTS

A. Compile, review, and submit specified service and maintenance contracts as specified for warranties and bonds.

1.08 PREPARATION FOR FINAL INSPECTION

A. Perform final cleaning as specified in Section 01740.

B. Assemble warranties, service and maintenance contracts, operating and maintenance instructions, and other items as specified, and submit to the Architect.

C. Remove temporary tapes, wrapping, coatings, paper labels, and other similar items. Dust, mop, wash, or wipe exposed and semi-exposed surfaces.

D. At the Contractor's request, the Architect will attend a pre-final detailed Project review, to allow the Contractor to gather the majority of punch list items while the subcontractors are still on the Project. Provide a typewritten list of all items remaining to be completed or corrected; list by room number and item number. Segregate plumbing, HVAC, and electrical on separate lists.

E. At the Contractor's request, the Architect will make a final Project review when the items in the pre-final punch list have been completed and after final cleanup, operation tests and the like have been performed.

F. When the Architect determines that the Project is substantially complete and that final punch list items are completed, a final Project Inspection Report shall be executed.

G. Upon execution of the Final Project Inspection Report, record and pay for Notice of Completion and furnish copies to the Owner and the Architect.

1.09 RESTORATION OF DAMAGED WORK

A. Restore or replace damaged materials and finishes caused by movement of equipment or other operations as specified or directed by the Architect, at no additional cost to the Owner.

B. Restoration shall be equal to the original work, and finishes shall match the appearance of existing adjacent work.

1.10 REMEDIAL WORK

A. Replace work due to faulty workmanship or materials at no additional cost to the Owner.

B. Coordinate work with the Owner and perform at such time and manner to cause minimal interruption and inconvenience to the Owner's operations.

1.11 EXTRA MATERIALS

A. Where specified, provide extra materials in the quantities and manner specified.

B. Delivery and certification of extra materials shall be prerequisite to Substantial Completion.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01788

PRODUCT WARRANTIES AND BONDS

PART 1 – GENERAL

1.01 DESCRIPTION

A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.

B. Refer to the General conditions for terms of the Contractor's special warranty of workmanship and materials.

C. Specific requirements for warranties for the work and products and installations that are specified to be warranted, are included in the individual Sections of Divisions 2 through 16.

D. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

E. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.02 DEFINITIONS

A. Standard Product Warranties are pre-printed written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

B. Special Warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.03 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.

B. Reinstatement of Warranty: When work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective work regardless of whether the Owner has benefited from use of the work through a portion of its anticipated useful service life.

D. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

E. The Owner reserves the right to refuse to accept work for the Project where a special warranty, certification, or similar commitment is required on such work or part of the work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.05 SUBMITTALS

A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the work, or a designated portion of the work, submit written warranties upon request of the Architect.

1. When a designated portion of the work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15-days of completion of that designated portion of the work.

B. When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.

C. Form of Submittal: At Final Completion compile two copies of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual. Use warranty form in Section 01789.

D. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-inch by 11-inch paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name, of the product, and the name, address and telephone number of the installer.

2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the Project title or name, and the name of the Contractor.

3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS

Not Used.

PART 3 – EXECUTION

Not used.

END OF SECTION

SECTION 01789

FORM OF WARRANTY

WARRANTY FOR _____.

We hereby warrant that the _____ we have provided has been completed in accordance with the requirements of the Specification Section _____ and the Contract Documents.

We agree to repair or replace our work, together with other adjacent work which may be displaced by so doing, that may prove to be defective in its workmanship or material within a period of _____ from the Date of Acceptance of the above named Project by the Owner; and we also agree to repair damages resulting from such defects, without expense to the Owner, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of our failure to comply with the above mentioned conditions within 15-days after being notified in writing by the Owner, we collectively or separately do hereby authorize the Owner to proceed to have such defective work repaired or replaced and made good at our expense, and we will honor and pay the costs and charges therefor upon demand.

Signed _____ Date _____
(Subcontractor's name, address, and license number)

Countersigned _____ Date _____
(Contractor's name, address, and license number,
or manufacturer's name and address)

[OR]

Signed _____ Date _____
(Contractor's name, address, and license number)

END OF SECTION