

COUNTY OF VENTURA
VENTURA COUNTY MEDICAL CENTER
MAMMOGRAPHY ROOMS & NEEDLE BIOPSY ROOM

SPECIFICATION NO. CP11-05
PROJECT ENT 11103

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SECTION 01000

SPECIAL PROVISIONS

1.01 GENERAL

The following items supplement, modify, change, delete from, or add to the General Provisions. Where any portion of the General Provisions is modified, or any paragraph, subparagraph or clause thereof is modified or deleted, unaltered provisions remain in effect.

- A. Reference 1-2 Definitions. Comply with additional requirements of Section 01094.
- B. Reference 2-5.3 Submittals. Comply with additional requirements of Section 01340.
- C. Reference 2-5.4 Record Drawings. Comply with the additional requirements of Section 01720.
- D. Reference 4-1.2 Protection of Work and Materials. Comply with additional requirements of Section 01610.
- E. Reference 4-1.6 Trade Names or Equals. Comply with additional requirements of Section 01640 for methods of requesting approval for "or equal" materials or methods.

Add the following paragraph to 4-1.6.1: "When one or more than one manufacturer is listed as acceptable in a specification section, the first manufacturer and/or product listed is the basis for development of the Contract Documents, and establishes the required minimum standard of quality. This is also the basis for the indicated size and dimensions of the product and/or equipment. If manufacturer and/or product other than first listed is used, then Contractor shall bear all costs of redesign and changes in construction necessary to adapt the offered equipment or product to the Work."

- F. Reference 6-1 Construction Schedule and Commencement of Work. Comply with the additional provisions below:

Within (10) Calendars days after being awarded the Contract, Contractor shall submit a progress schedule for Owner approval. The schedule shall not exceed time limits set forth in the Contract and shall comply with all applicable scheduling requirements. Failure to submit a schedule or submittal of a schedule which shows completion of Work beyond the specified completion date shall be deemed a material breach by Contractor. The schedule must indicate the beginning and completion of all phases of construction and shall use the "critical path method" (commonly called CPM) for the value reporting, planning and

scheduling of all Work required under the Contract. The Engineer may disapprove any portion of the schedule, or require modifications to it if, in the opinion of the Engineer or Owner, adherence to the progress schedule will not cause the Work to be completed in accordance with the Contract.

Contractor shall not submit a schedule showing early completion without indicating float time through the date set for completion of the Work by the Owner. Contractor's schedule shall account for all days past early completion as float that belongs to both the Owner and Contractor. Usage of float shall not entitle Contractor to any delay claim or damages due to delay.

In addition to providing a schedule update every (30) days, the Contractor, if requested by Engineer or Owner, shall provide revised schedules within (10) days if, at any time, the Engineer or Owner consider the completion date to be in jeopardy because of activities occurring behind schedule. The additional schedule shall include a new arrow or precedence diagram and schedule reports conforming to the requirements above, designed to show how the Contractor intends to accomplish the Work to meet the completion date. The form and method employed by the Contract shall be the same as for the initial schedule. The Contractor shall modify any portions of the schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall be deemed behind schedule. If Contractor submits a revised schedule showing an earlier completion of the Work, Engineer's acceptance of this revised schedule shall not entitle Contractor to any delay claim or damages due to such revised schedule.

- G. Reference 7.5.3.2 Contractor Furnished Permits. Deferred approvals noted on Sheet T of the drawings require the Contractor's preparation of plans and calculations to obtain approval of permits from OSHPD in addition to the basic permits arranged for by the Agency as provided in 7-5.3.1. Contractor shall take action in a timely manner to obtain such approvals or permits so as not to delay completion of the Work beyond the time provided in Standard Conditions General Provisions Article 6-7. Contractor shall include all costs and consider the time required to obtain approvals or permits in the Contract price bid.
- H. Reference 7-8.1 Cleanup and Dust Control. Comply with the additional provisions of Section 01710.
- I. Reference 7-8.4 Sanitation. Comply with additional requirements of Section 01500, Paragraph 1.04.
- J. Reference 7-8.5 Temporary Light, Power and Water. Comply with additional requirements of Section 01500, Paragraphs 1.01, 1.02, and 1.03.
- K. Reference Part 1 - General Provisions, Facilities for Agency Personnel, Section 8. A field office and associated equipment as indicated in Section 8 will not be required to be provided by the contractor.

1.02 CONFERENCE

Pre-Bidding Conference. A pre-bidding conference will be held at the project site, beginning at the main entrance of the hospital located on Loma Vista Road, Ventura, (see Sheet A1.0 of drawings) at the date and time stipulated on the Bid Form. At this

meeting bidders may tour the facilities. None of the information transmitted at this meeting will be construed in any way to modify the plans and specifications. Any modification will be forwarded to all plan holders as an addendum.

Pre-Construction Conference. The Engineer will schedule a pre-construction conference after Notice of Award.

1.03 QUALITY ASSURANCE/CONTROL OF INSTALLATION

Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship to produce Work of specified quality as indicated in Section 01799.

1.04 REFERENCES

Conform to reference standard by date of issue current as of date of Contract Documents.

1.05 BARRIERS AND FENCING

Construct and maintain barricades, fencing, planking, shoring, and warning signs and lights for the following: As required by local authorities and State safety ordinances; as required to protect the Agency's property from injury or loss; as required for the protection of the public; and as required as indicated on the drawings. Provide walks around any obstructions on site or made in any public place for carrying on the work covered in this contract as required by local authorities.

1.06 HOSPITAL EMERGENCY ROOM ACCESS

The existing on-site driveway south of the site (noted as "Hospital Driveway South" on Site Plan Drawings) must remain open and unobstructed at all times for emergency vehicle, all weather, access to the hospital emergency room entrances. Any interruption of access must be for the least possible duration and must be approved in writing by the Engineer at least 48 hours prior to closure.

One emergency driveway must remain open and completely accessible at all times. Provide directional signs to indicate emergency vehicle alternate route to the hospital emergency room entrance when any driveway beyond the limits of work is obstructed for construction purposes. Submit a written diagram of the proposed directional sign sizes (minimum six-inch high letters) and locations prior to any access disruption. Such signs and their locations must be approved by the Engineer prior to driveway obstruction.

1.07 CUTTING AND PATCHING

The Contractor shall perform cutting and patching per the provisions of Section 01045.

1.08 PROJECT MEETINGS

Project meetings shall be held as stipulated in Section 01200.

1.09 TESTS AND INSPECTIONS

Tests and inspections shall be performed per the provisions of Section 01410.

1.10 DELIVERY, HANDLING AND STORAGE

Comply with the provisions of Section 01610.

1.11 SYSTEM DEMONSTRATIONS AND INSTRUCTION

Comply with the provisions of Section 01670.

1.12 CLEANING

The project shall be cleaned per the provisions of Section 01710. This is in addition to that which is mentioned in Section 7-8.1 of the General Provisions.

1.13 OPERATION AND MAINTENANCE

Furnish operation and maintenance data per Section 01730.

1.14 SPARE PARTS AND MAINTENANCE MANUALS

Provide spare parts and maintenance materials per the provisions of Section 01750.

1.15 SUMMARY OF PROJECT

The Project Work, sequencing, and other provisions will be as indicated in Section 01011.

1.16 CONTRACTOR PARKING AND MATERIAL STORAGE

Parking and storage space is extremely limited on the VCMC campus. The contractor shall park all employee and construction vehicles and equipment and store all materials within the designated limits of the project work.

1.17 HEALTH CARE AGENCY CONTRACTORS' HANDBOOK

The contractor shall comply with the Health Care Agency Contractor's Handbook and complete a one-hour training with VCMC Facilities Staff. This handbook establishes the Owner's criteria for working within and around an operating health care facility. This handbook is made a part of the specifications by reference and is available for review from the Agency. The training will be scheduled with the Engineer and completed prior to and construction activities on site.

11.19 PROJECT SUPERINTENDENT / PROJECT MANAGER

- A. The Contractor shall provide a full-time project superintendent on the job site each working day between the contract start date specified in the contract proposal and the acknowledgement of completion of Work specified in Section 6-8. The project superintendent shall have a minimum of 5 years experience in managing OSHPD projects of similar complexity. The Contractor shall also employ a project manager, who is responsible for the supervision of the project superintendent, who has a minimum 5 years experience in managing construction of OSHPD projects of similar complexity and size to the Work. For each day work is performed at the site between the start date specified in the contract proposal and the acknowledgement of completion of Work specified in Section 6-8 for which the required project superintendent is not at the job site or

each working day the project manager is not employed by the contractor, the contractor will be assessed liquidated damages of \$595 and \$480 respectively. The project manager can act in the capacity of the project superintendent in the event of temporary illness, vacation, or emergency to the project superintendent. Alternatively in the event of illness, vacation, etc., a superintendent may be substituted per the provisions of Section B., below. These liquidated damages are in addition to those specified elsewhere.

- B. The identity and qualifications of the project superintendent and project manager shall be submitted by the Contractor at least 10 working days prior to the contract start date for the review and approval by the Engineer. There shall be no substitution for the project superintendent or project manager identified by the Contractor without prior written approval of such substitution by the Engineer. Any subsequent project superintendent or project manager shall have the minimum qualifications set forth above.

END OF SECTION

SECTION 01011

SUMMARY OF PROJECT

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. The Work of the Contract (Specification No. CP11-05, Project No. ENT11103) comprises the construction specified in the Specifications and that shown on the drawings labeled "Mammography Rooms and Needle Biopsy Room."

1.02 CONTRACTOR'S USE OF PREMISES

- A. Contractor shall use only those areas for parking, storage, and other construction operations as designated by the Engineer.
- B. The contractor may use the upper parking lot as designated on the drawings for parking and staging. The contractor may not park in any other areas than the project area or the upper parking lot.

1.03 SETTING OUT AND SURVEYING

- A. The work of each section of the specifications shall include all necessary setting out and surveying work required to perform the work of that section of the specifications.
- B. The work of each section of the specifications shall include the responsibility for coordinating layout and work schedule requirements for that specification section with the layout and work schedule requirements of other specification sections.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01015

SUMMARY OF APPLICABLE CODES

PART 1 GENERAL

1.01 APPLICABLE CODES:

TITLE 24, C.C.R., PART 1, 2010 C.A.C.
TITLE 24, C.C.R., PART 2, 2007 C.B.C.
TITLE 24, C.C.R., PART 3, 2007 C.E.C.
TITLE 24, C.C.R., PART 4, 2007 C.M.C.
TITLE 24, C.C.R., PART 5, 2007 C.P.C.
TITLE 24, C.C.R., PART 9, 2007 C.F.C.
N.F.P.A. 99, HEALTH CARE FACILITIES, 2002 EDITION
N.F.P.A. 101, LIFE SAFETY CODE, 1997 EDITION

NOTE: California Amendments enforced by OSHPD 1, SFM, OSA-AC and the Local Health Official will apply to Title 24, C.C.R., Parts 2-5.

Building Official: O.S.H.P.D.
Fire Official: O.S.H.P.D.
Utilities: Gas, Southern California Gas
Water, City of Ventura
Sewer, City of Ventura
Electric, Southern California Edison
Telephone, AT&T
Flood Control, County of Ventura

PART 2 PRODUCT - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01045
CUTTING AND PATCHING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work includes:
1. Furnish all labor, materials, tools, equipment and services for all cutting and patching as indicated in accordance with provisions of Contract Documents.
 2. Completely coordinate work with all other Contract work.

1.02 WORK

- A. Install work in such a manner and sequence as to preclude or minimize cutting and patching of new work.
- B. Execute cutting (including excavation) fitting or patching of work, required to:
1. Make several parts fit properly.
 2. Uncover work to provide for installation of ill-timed work.
 3. Remove and replace defective work.
 4. Remove and replace non-conforming work.
 5. Remove samples of installed work for testing.
 6. Install specified work into existing construction.
- C. In addition to contract requirements, upon written instructions of the Engineer:
1. Uncover concealed work to provide for Engineer's observation of covered work, in accordance with Contract Documents.
 2. Remove samples of installed materials for testing, in accordance with Contract Documents.
 3. Remove work to provide for alteration of work in place.
- D. Do not endanger any work by cutting or excavating, or otherwise.

- E. Do not allow cutting or removal of any structural concrete or other structural member; dig under any foundation or wall or other construction; or in any way allow any such modification to be done, without the written consent of the Engineer.
- F. Pay for Engineer-approved corrections of damage resulting from violation of these provisions.
- G. Use only experienced firms or individual trades qualified to perform work required.

1.03 JOB CONDITIONS

- A. Perform preliminary investigations as required to ascertain extent of work.
- B. Before start of cutting and patching work, obtain and pay for all permits required by authorities having jurisdiction relative to specific cutting operations.
- C. Obtain approval of authorities having jurisdiction for work which affects exitways, means of egress, or access to, or exit from any area or building.
 - 1. Review with and obtain approval of authorities for any temporary construction which affects such areas.

1.04 PAYMENT FOR COSTS

- A. Costs caused by ill-timed or defective work, or work not conforming to Contract Documents shall be paid by the Contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Materials for patching of work shall match, meet, align and be finished to match existing or new adjacent finishes.
- B. Comply with applicable specifications sections governing type of work to be done.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of work, including elements subject to movement or damage during:
 - 1. Cutting and patching.
 - 2. Excavating and backfilling.

- B. Correct unsatisfactory existing conditions.
- C. After uncovering work, inspect conditions affecting installation of new products.

3.02 PREPARATION PRIOR TO CUTTING

- A. Provide shoring, bracing and support as required to maintain structural integrity of project.
- B. Provide protection for other portions of the project which may be affected by the work of this section.
- C. Provide protection from elements when required.

3.03 CUTTING AND REMOVAL - GENERAL

- A. Execute fitting and adjustment to insure finished installation complies with specified tolerances and finishes.
- B. Execute cutting by methods which will prevent damage to other work and will provide proper surfaces to receive installation of repairs to new work.
- C. Perform backfilling as specified in the applicable specification sections.
- D. Neatly cut and remove materials, and prepare all openings to receive new work.
- E. Provide shoring, bracing, and other supports to prevent movement, settlement, or collapse of remaining or adjacent wall areas, structure, or facilities.
- F. Arrange shoring, bracing, and supports to prevent overloading of any structure.

3.04 MATCHING AND PATCHING

- A. Where items are removed from preceding work, repair work disturbed by removal.
- B. Where walls, ceilings, floors or partitions are removed, repair adjacent walls, ceilings or floors disturbed by removal.
- C. Where preceding construction is cut or otherwise disturbed to permit installation of work, match and patch existing disturbed construction.
- D. Use methods and materials similar in appearance, and equal in quality to areas or surfaces being repaired.
- E. Restore work which has been cut or removed; install new products to provide completed work in accordance with requirements of Contract Documents.
- F. Patch work must in every way possible match existing work and adjacent surfaces.

- G. Finish entire surfaces as necessary to provide an even finish.
 - 1. Refinish continuous surfaces in same plane to nearest intersections or changes in plane.
 - 2. Refinish assemblies of several components completely as necessary to restore finish.

END OF SECTION

SECTION 01094

DEFINITIONS

PART 1 - GENERAL

1.01 DESCRIPTION

A. General:

1. Basic definitions are included here to define terminology used throughout specifications.
2. Definitions given are in addition to terms defined in the General Provisions.

1.02 COMPLETION

- A. Completion: The meaning of terms such as "substantial completion", "beneficial occupancy", "field completion", or any such terminology through which the opinion is expressed that contract Work is complete, shall be defined in Standard Specification 6-8, Completion, Acceptance and Warranty. No item warranty period covered under this contract shall commence until such completion.

1.03 THE CONTRACT

- A. The Contract is defined in the General Provisions.
- B. The Contract Documents shall not be construed to create a contractual relationship of any kind 1) between the Consultant and Contractor, 2) between the Agency and a Subcontractor or Sub-subcontractor or 3) between any persons or entities other than the Agency and Contractor.

1.04 FURNISH

- A. Unless specifically limited in context, means furnishing to project site items specified, to include packaging, shipping, unloading, storing, protecting, unpacking, relocating and assembling if necessary.

1.05 INSTALL

- A. Means incorporating in the Work including all necessary labor, materials, equipment and connections to perform work indicated and protection thereof after installation until Acceptance.

1.06 PROVIDE

- A. Means furnish and install.

1.07 THE CONTRACTOR SHALL

- A. In the interest of conciseness and an imperative writing style, any sentences, statements, and clauses used in the Specifications may exclude any form of the verb "shall" which is normally expressed in verb phrase with verbs such as "furnish", "install", "provide", "perform", "construct", "erect", "comply", "apply", and "submit". Any such sentences, statements, and clauses are to be interpreted to include an applicable form of the phrase "the Contractor shall" and requirements described therein interpreted as mandatory elements of the Contract.

1.08 OBSERVATION

- A. "Observe" or "Observation" means, "to become generally familiar with the process and quality of the work and to determine if the work is proceeding in general accordance with the Contract Documents based on what is plainly visible at the construction site, without the removal of materials or other construction that is in place."

1.09 ACCEPTABLE PERFORMANCE

- A. A component or system being able to meet specified design parameters under actual load.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION

A. GENERAL

1. Requirements Included:

a. On a periodic basis, during construction, during normal business hours, Contractor's Project Manager, Superintendent and Subcontractor representatives shall attend meetings upon request of Engineer or as required in other sections of the Specifications. Engineer may invite Agency representatives and other parties as Engineer deems appropriate. Engineer will chair the meetings. Engineer will prepare minutes of the meetings, at his sole discretion. Contractor shall sign the minutes indicating his agreement therewith within 10 days of his receipt thereof or return same with suggested amendments. The meetings shall include:

1) Progress Review Meetings: Held on a periodic basis, usually weekly, to review work in progress, schedule status, issues that are current as of meeting and other matters raised by Engineer or Contractor. Contractor shall be prepared, at such meetings, to propose and commit Contractor to corrective actions and associated timetables for remediation of Contractor-accountability deviations from Contract requirements, if applicable. At each Progress Review Meeting the Contractor shall provide a three-week look ahead schedule depicting the upcoming activities for the project.

2) Miscellaneous Meetings: Held on an as needed basis, as deemed necessary by Engineer or as proposed by Contractor and accepted by Engineer.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01340

SUBMITTALS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work includes:

1. Furnish all submittals for work as indicated in accordance with provisions of Contract Documents.
2. Submittals include the following items:
 - a. Shop drawings.
 - b. Product data.
 - c. Samples.
 - d. Project information.
 - e. Schedule of Submittals: Prior to first application for payment.
3. Completely coordinate with all Contract work.

1.02 DEFINITIONS

- A. Shop Drawing submittals are drawings, diagrams, schedules and other data specially prepared for Work by Contractor, manufacturer, supplier or distributor to illustrate some portion of Work.
- B. Product Data submittals are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, test data and other information furnished by Contractor to illustrate material, product or system for some portion of Work.
- C. Sample submittals are physical examples which illustrate materials, equipment or workmanship and propose standards by which Work will be judged.
 1. Samples also include job site mockups.
- D. Project Information submittals are items pertaining to quality control and Agency information which may not require review or response by Engineer and are to be retained for project file only.
 1. Examples:
 - a. Test reports.
 - b. Certifications.
 - c. Design calculations.
 - d. Installation instructions.

- E. Shop Drawings, Product Data, Samples and similar submittals are for those portions of Work for which submittals are required and shall indicate the way the Contractor proposes to conform to information given and the design concept expressed in Contract Documents.

1.03 TRANSMITTAL - GENERAL

- A. Submit all items to Engineer, or person or entity to whom Engineer has delegated this function in writing.
- B. Contractor is responsible for making submissions.
 - 1. Submit to address indicated by Agency.
 - 2. Each transmittal to include items from one specification section only.
- C. Make submittals sufficiently in advance of date required to allow Engineer reasonable time for review, and resubmission if necessary.
 - 1. Schedule submittals requiring Engineer color selection within 30 days following award of contract.
 - 2. Items not submitted in accordance with provisions of this section will be returned, without action, for resubmission by Contractor.

1.04 SHOP DRAWINGS AND PRODUCT DATA

- A. Shop drawing and product data submittals are required as called for by specification section submittal paragraph, or by additional requirements of the respective sections.
- B. Identify drawings with manufacturer, item, use, type, project designation, specification section or drawing detail reference.
- C. Submit six copies of each shop drawing.
 - 1. Do not fold.
 - 2. Submit drawings not smaller than 24 inches x 36 inches or not larger than 30 inches x 42 inches.
 - 3. Allow a clear space, approximately 6 x 6 inches, for stamping on right hand side of each sheet.
- D. Submit six copies of product data items such as equipment brochures, cuts of fixtures, or standard catalog items.
 - 1. Indicate exact item or model and proposed options.
 - 2. Include scale details, sizes, dimensions, performance characteristics, capacities, wiring diagrams, controls and other pertinent data.
 - 3. Do not fold.
 - 4. Submit 8-1/2 x 11 inch minimum or 11 x 17 inch, maximum size copy.

1.05 SAMPLES

- A. Sample submittals are required as called for by specification section submittal paragraph.
- B. Identify samples with manufacturer's name, item, use, type, project designation, specification section or drawing detail reference, color, range, texture, finish and other pertinent data.
- C. Engineer may, at his option, retain samples for comparison purposes.
- D. Field Mockups: Fabricate on site in accordance with specification section requiring them.

1.06 PROJECT INFORMATION

- A. Submit project information as called for by specification section submittal paragraph.
- B. Submit one copy each of project information items.
 - 1. Include pertinent data.
 - 2. Do not fold.
 - 3. Submit 8-1/2 x 11 inch minimum or 11 x 17 inch maximum copy size.
- C. Project information:
 - 1. Engineer may review at its sole discretion project information for compliance with Contract Documents only.
 - 2. Review will not constitute a detailed check of submitted design calculations.
 - 3. Appropriateness and accuracy of calculations is responsibility of Contractor (and Contractor's professional engineer when such calculations are required to be professionally sealed).
 - 4. When professional or other certification of performance criteria of materials, systems or equipment is required by Contract Documents, Engineer shall be entitled to rely upon accuracy and completeness of such calculations and certifications.

1.07 CONTRACTOR ACTION

- A. Review, approve, stamp, and sign items prior to submission to Engineer.
- B. Stamp indicates Contractor has:
 - 1. Verified field dimensions and quantities.

2. Verified field construction criteria, materials, catalog numbers and similar data.
 3. Reviewed and coordinated submittal data with requirements of Work and Contract Documents.
 4. Certified that submittals comply with Contract Documents.
- C. Reproduce and distribute submittals to Contractor's organization, including Subcontractors/vendors and to Agency in specified number of copies or additional copies as necessary to support execution of the Work.
- D. Resubmit items stamped "revise and resubmit" or "rejected" until approval is received.
1. Contractor shall, if applicable, add letter suffix to previous transmittal number, to indicate resubmission, for example 03450A-1A.
 2. Contractor shall direct specific attention, in writing, on resubmitted Shop Drawings, Product Data or Samples, to revisions other than those requested by Engineer on previous submittals.
- E. Contractor shall direct specific attention, in writing or on Shop Drawings, Product Data or Samples, to deviations from Contract Documents.
1. Contractor shall not be relieved of responsibility for deviation from requirements of Contract Documents by Engineer's approval of Shop Drawings, Product Data and Samples unless Contractor has specifically informed Engineer in writing of such deviation at time of submission and Engineer has given written approval to each specific deviation. Such deviations shall require Agency's agreement unless it is considered a minor change in Work and does not involve adjustment in Contract Sum or Contract Time.
- F. Contractor shall not be relieved from responsibility for errors or omissions in Shop Drawings, Product Data or Samples by Engineer's approval thereof.
- G. Contractor is responsible for confirmation and correlation of dimensions at job site; for information that pertains solely to fabrication processes or to techniques of construction; and for coordination of work of all trades.
- H. Completed work shall strictly conform to approved samples.
- I. Do not start work which requires submittals, prior to return of submittals with Engineer's stamp indicating approval.

1.08 SCHEDULE

- A. Within 30 days following Notice to Proceed, submit to Engineer a complete schedule of required submittals indicating proposed submittal dates for items in format acceptable to Engineer.
- B. Include submittal number as described in 1.10 below.

- C. Furnish all submittals to Engineer, for entire Contract, per the schedule indicated in Paragraph A above.

1.09 ENGINEER REVIEW: SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- A. Review is only for conformance with design concept of project and compliance with intent of information given in Contract Documents.
- B. Engineer shall stamp submittals indicating action taken.
- C. Engineer's review shall not constitute approval of safety precautions or, unless otherwise specifically stated by Engineer, of any construction means, methods, techniques, sequences or procedures.
- D. Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

1.10 SUBMITTAL TRANSMITTAL FORM

- A. Submittal number shall be provided on each transmittal.
 - 1. Identify each transmittal using applicable 5 digit specification section number.
 - 2. Indicate submittal designation character:

A = Shop drawing
B = Product data
C = Sample
D = Project information
 - 3. After designation character insert a dash, "-".
 - 4. Indicate sequence number, i.e., first submittal of Section 03450 series would be numbered, i.e. 03450A-01. If returned for re-submission, second submission would be 03450A-01A.
- B. Indicate description and manufacturer.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01410

TESTS AND INSPECTIONS

PART 1 GENERAL

1.01 GOVERNING BUILDING CODES

- A. Governing Codes: California Building Code 2007 Edition.

1.02 SECTION INCLUDES

- A. Provide plant, equipment, transportation, materials, labor and technical services required to perform on- or off-site sampling, identification, certification, testing, special inspections and reporting as specified herein and in the technical specifications, to establish compliance with the Contract Documents, above-referenced Code Regulations and as necessary to properly complete the Contract.

1.03 COOPERATION AND ACCESS

- A. Any required testing and/or inspections shall be in cooperation with and coordinated with the work and installation schedules of the trades specified in the various specifications sections.
- B. Cooperation: Contractor shall cooperate with and provide testing laboratory and Agency's Inspectors opportunity and assistance in taking samples, making field tests and performing required inspections.
- C. The Engineer and Agency's Inspector shall at all times have access for the purpose of inspection, identification or sampling to all parts of the work and to the shops where work is in preparation. Contractor shall at all times maintain proper facilities and safe access for such inspection.

1.04 INSPECTOR OF RECORD (IOR)

- A. An Inspector provided by or designated by the Agency will be assigned to the work.
- B. The work in all stages of progress shall be subject to the personal continuous observation of the Inspector and he shall be responsible for assuring that the work is executed according to plans and specifications. He shall prepare and submit weekly reports of his observations.

1.05 TESTING AGENCIES

- A. Selection: The Agency will provide or designate the testing and inspection organizations and personnel. Payment shall be as specified in the General Provisions.

1.06 TEST AND INSPECTION REPORTS

- A. The Testing Agencies shall report the results of tests and inspections performed, in writing and shall furnish the number of copies required herein. The reports shall state that the tests or inspections were made under the responsible charge of a Testing Engineer who holds a license to practice Geotechnical Civil or Quality Engineering in the State of California, and that testing or inspections were performed in accordance with the provisions of the Specifications and the applicable building codes. Test reports shall show specified design strengths, the corresponding test results and state that the tested material either passed or failed to pass the tests.
- B. Reports shall be executed immediately upon conclusion of each procedure and copies forwarded to: Engineer, Architect, Structural Engineer, Agency's Inspector, Contractor, and the Ventura County Building and Safety Department.

1.07 SPECIAL REQUIREMENTS

- A. The Engineer and Inspector reserve the right to demand for test or special examination any material, item or assembly, or parts thereof, to assure compliance with the letter or intent of the specifications. They may reject for satisfactory correction or replacement at the sole expense of the Contractor, any material, workmanship or part thereof judged defective or non-conforming as a result of such test or examination.

1.08 PAYMENT

- A. The following testing costs shall be assessed to the Contractor by credit change order and deducted from amounts due or to become due the Contractor:
1. Testing of unidentified materials.
 2. Testing of materials substituted for those specified or previously qualified.
 3. Tests, re-tests, re-examinations or special examinations of materials or workmanship found to not comply as specified in Paragraph 1.07 above.
 4. Tests or inspections required due to Contractor's error.
 5. Excessive costs due to faulty, wasteful or improper scheduling or work practices, failure to conform to accepted schedules or make required notifications.
 6. Additional procedures required solely in the interest or convenience of the Contractor, including alternative concrete mix designs.

- B. At any time prior to completion of the Contract, should it be considered necessary by the Agency to make examinations of or test any work in place by removing or tearing out the same, Contractor on request shall promptly furnish all required facilities, labor and materials necessary. If such work is found to be defective or non-conforming due to the fault of the Contractor or his subcontractors, he shall defray the cost of such examinations and satisfactory reconstruction. If, however, such work is found to meet the requirements of the Contract, the additional costs involved in the examination and reconstruction shall be allowed the Contractor.

PART 2 TESTS AND INSPECTION

2.01 REQUIRED TESTS AND INSPECTIONS

- A. Tests and inspections, as set forth in the Uniform Building Code, State Building Code and Titles 22 or 24, outlined as follows and specified in detail in the Technical Specifications will be required and paid for by the Agency, except as hereinbefore specified.

2.02 CONCRETE AND REINFORCING STEEL - SPECIFICATIONS DIVISION 3 - CONCRETE

- A. Tests shall be performed by the Testing Laboratory.
- B. Test Criteria: California Building Code Chapter 17 and 19.
- C. Concrete materials sampling and testing:
 - 1. Portland Cement - 1916 A.1.
 - 2. Concrete Aggregates - 1916 A.1.
 - 3. Reinforcing Steel - 1916 A.2.
 - 4. Waiver of Material Testing - 1916 A.4.
- D. Concrete Quality:
 - 1. Proportions of Concrete - 1905.1, 1905.2, 1905.3, 1904.4, 1905.5.
 - 2. Strength Tests of Concrete - 1905.6
- E. Concrete Inspection:
 - 1. Job Site Inspection - 1905.7

END OF SECTION

SECTION 01500

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 - GENERAL

1.01 TEMPORARY ELECTRICITY

- A. Make arrangements for and install all equipment, poles, wiring, switches, outlets, etc., to provide power and necessary step down transformers for power for all lighting and power requirements for construction purposes. Determine and provide necessary voltages for all construction operations.
1. Existing on-site electrical distribution system may be used for temporary service if system is compatible with construction operations.
 - a. Verify with Agency conditions associated with use of on-site electrical distribution system.
 - b. Provide temporary electrical service from designated point of connection to work area. The designated point of connection to be coordinated with Engineer.
 - c. Verify that required electrical capacity is available at the designated point of connection.
 - d. During construction operations, repair and/or replace, as required, any appurtenances damaged due to Contractor's operations.
 - e. Should Hospital operations require that the temporary electrical service provided to the Contractor be temporarily disconnected for maintenance or testing purposes, Contractor will be provided with twenty-four hours notice of such disconnection. Contractor shall make provisions to continue construction without interruption and without additional cost to the Agency.
 2. Pay costs of installation of temporary system.
 3. Agency to furnish electricity to Contractor at no cost.
 4. Remove all temporary electrical equipment, when no longer needed.
 5. At completion of work, remove and replace all damaged parts of permanent systems.
- B. Provide extension cords for Contractor use.

- C. Provide temporary electrical power of sufficient capacity required for Contractor operations.
- D. Provide artificial lighting with light levels in all areas adequate for performance of the Work and Agency inspection.

1.02 TEMPORARY WATER

- A. Make all arrangements, install equipment, piping, and outlets for an adequate supply of clean water for construction purposes.
 - 1. Existing on-site water system may be used for temporary service if water is compatible with construction operations.
 - a. Verify with Agency conditions associated with use of on-site water system.
 - b. Provide temporary water line from designated point of connection to work area.
 - c. During construction operations, repair and/or replace, as required, any appurtenances damaged due to Contractor's operations.
 - 2. Pay costs of installation of temporary system.
 - 3. Agency to furnish water to Contractor at no cost.
 - 4. Do not draw water from fire hydrants, except to extinguish a fire, without prior approval of water utility agency and Engineer.

1.03 TEMPORARY TOILETS

- A. Provide temporary toilet facilities for use of all Contractor personnel involved in or necessary for performance of the Work. Facilities shall also be available for use by County personnel.
 - 1. Provide facilities complying with local, State and Federal sanitary laws and regulations.
 - 2. Maintain in clean, sanitary condition.
 - 3. Provide adequate supplies of toilet paper, cleaning supplies, and other required items.
- B. Permanent fixtures in adjacent buildings may not be used.

1.04 CONTRACTOR'S FIELD OFFICE AND STORAGE YARD

- A. Contractor shall furnish field offices and storage area as needed to perform the Work. The Contractor's site office and storage area may be on-site within the

construction limits or, if off-site, he shall make his own arrangements and provide the Engineer a copy of the agreement with the owner of the off-site property.

- B. The storage yard and field office shall not interfere with ongoing operations and the area shall be kept in a clean and orderly condition.
- C. Prior to start of work, Contractor shall meet with Agency to define working, storing and traffic areas.
 - 1. Except as specifically provided, working and storing outside the areas approved by Engineer will not be permitted.
 - 2. Arrange and locate temporary structures and sheds to avoid interfering with construction or adjacent residential area.
 - 3. Contractor's working areas, staging, and storage areas shall not interfere with accessibility to adjacent office buildings, maintenance buildings or parking areas.
 - 4. Site Utilization Plan. Contractor shall, following agreement on working, storing and traffic areas, prepare a Site Utilization Plan indicating the agreed working, storing and traffic areas and submit six copies to the Agency.
- D. Provide, maintain and pay for telephone service to field office at time of project mobilization.

1.05 TEMPORARY ENCLOSURES

- A. Furnish and install temporary enclosures and door and window coverings required to protect existing building to remain from damage due to demolition and construction activities, vandalism or the elements.

1.06 TEMPORARY FENCES AND BARRICADES

- a. Furnish, install and maintain all necessary temporary fences, barricades, trench and hole covers, warning lights and all other safety devices necessary to prevent injury to persons and damage to property.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01610

DELIVERY, HANDLING AND STORAGE: MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work includes:
 - 1. Furnish all labor, materials, tools, equipment and services for delivery, handling, and storage of materials and equipment as indicated in accordance with provisions of Contract Documents.
 - 2. Completely coordinate with all other Contract work.
- B. Comply with applicable codes.
- C. Provide fire protection.
- D. Contractor will accept delivery, unload, handle, and properly store all Owner-furnished, Contractor-installed items (OFCI).

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PRODUCT DELIVERY

- A. By manufacturer's normal means unless otherwise required by Contract Documents.
- B. In original labeled containers.
- C. Where applicable, with UL labeling on packages.
- D. Contractor responsible for acceptance at site.
- E. Inspect items for damage upon delivery.

3.02 PRODUCT HANDLING AND STORAGE

- A. Use methods to avoid damage to item or structure.
- B. Protect weather fragile items from weather damage.
- C. Handle and store bulk aggregates to avoid contamination.

- D. Store to allow air circulation.
- E. Store only in authorized areas on site.
- F. Replace damaged items. Repair only with Engineer's prior written acceptance.
- G. Protect installed items as required until acceptance of Work.
- H. Uncrate, assemble, if required, and remove debris.
- I. When off-site storage is authorized, perform rehandling to move items to site at no added cost.

3.03 CLEANUP

- A. Remove excess materials from site.

END OF SECTION

SECTION 01640

SUBSTITUTIONS AS "OR EQUAL"

PART 1 - GENERAL

1.01 PRODUCT SELECTION - GENERAL

- A. Where the Contractor proposes substitutions per the provisions of Section 4-1.6 of the General Provisions the following conditions shall apply.

When more than one manufacturer is listed as acceptable in a specification section, the first manufacturer and/or product listed is the basis for development of the Contract Documents, and establishes the required minimum standard of quality. This is also the basis for the indicated size and dimensions of the product and/or equipment. If manufacturer and/or product other than first listed is used, then Contractor shall bear all costs of redesign and changes in construction necessary to adapt the offered equipment or product to the Work.

- B. Listing of a manufacturer implies acceptance of them only as supplier of a product which complies with specified item.
- C. Engineer reserves right to require Contractor proposed substitutions to comply with color, pattern and other characteristics of products of manufacturers listed in specifications.

1.02 REQUESTS FOR "OR EQUAL" SUBSTITUTION

- A. Only written requests with complete substantiating data for evaluation will be considered.
1. Request must be received by Engineer not later than 30 calendar days after Notice to Proceed or 30 days prior to when item was scheduled for submission under Section 01340, paragraph 1.08-A.
 2. Requests received late will not be considered.
 3. Submit evaluation data with form provided by Engineer.
- B. In making request for substitution, or in using an approved substitute item, supplier and Contractor represent:
1. They have investigated proposed product or method, and have determined that it is equal or superior in all respects to that specified, and that it will perform intended function.
 2. They will provide same warranty for substitute item as for product or method specified.

3. Where substitute manufacturers are provided with different control panels, starters, and electrical characteristics from scheduled equipment, make installation complete and pay all additional costs.
4. They waive all claims for additional costs or time related to substitution which subsequently become apparent.
5. They will pay all redesign and other costs resulting from substitution.
6. Acknowledge acceptance of these provisions in request.

1.03 SUBSTITUTION SUBMITTAL

- A. Submit complete data substantiating compliance of proposed substitution with Contract Documents.
- B. For products:
 1. Product identification, including manufacturer's name.
 2. Manufacturer's literature, marked to indicate specific model, type, size, and options to be considered:
 - a. Product description.
 - b. Performance and test data.
 - c. Reference standards.
 - d. Difference in power demand, air quantities, etc.
 - e. Dimensional differences from specified unit.
 3. Full size samples if requested by Engineer.
 4. Engineer reserves right to retain sample until physical units are installed on project for comparison purposes. Sample will then be returned to Contractor.
 5. Contractor to pay all costs of furnishing and return of samples.
 6. Engineer is not responsible for loss of, or damage to, samples.
 7. Name and address of at least 5 similar projects and name of representative Engineer can contact; to discuss product, installation, and field performance data.
- C. For construction methods:
 1. Detailed description of proposed method.
 2. Illustrate with drawings.
- D. Itemized comparison of proposed substitute to specified item.
- E. Accepted substitutions will not allow any contract time extensions.
- F. Cost of proposed substitution in comparison with product or method specified.

1.04 REVIEW/APPROVAL OF SUBSTITUTIONS

- A. Substitutions will not be approved by Agency if (in Agency's sole judgment):
1. They are not submitted in accordance with this section.
 2. Acceptance will require substantial revision of Contract Documents, or building spaces.
 3. Request for substitution does not indicate specific item for which request is submitted.
 4. They propose acceptance of manufacturer without presenting manufacturer's product/model name or number.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01670

SYSTEM DEMONSTRATIONS AND INSTRUCTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work includes:
 - 1. Furnish all labor, materials, tools, equipment and services for all system demonstrations as indicated in accordance with provisions of Contract Documents.
 - 2. Completely coordinate with all other Contract work.
- B. Provide instruction for all equipment and systems for which operating and maintenance data is required.

1.02 JOB CONDITIONS

- A. Complete all instruction prior to final Acceptance of the Work.
 - 1. Submit separate report for each system or type of equipment, subject to Agency's approval.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION

- A. Do not begin instruction until component, assembly or system has been tested as specified and is in correct operating condition.
- B. Have operating and maintenance data available for use during instruction.
- C. Schedule all instruction with Engineer.

3.02 INSTRUCTION

- A. Instruct Agency's personnel in operation and maintenance of equipment and systems.
- B. Provide all necessary instruction to satisfaction of Engineer.
- C. Explain use of operating and maintenance manuals.
- D. Tour areas involved and identify:

1. Maintenance points and access.
 2. Control locations and equipment.
- E. Explain operating sequences.
1. Identify location and show operation of switches, valves, etc., used to start, stop and adjust systems.
 2. Explain use of flow diagrams, operating sequence diagrams, etc.
 3. Demonstrate operation through complete cycle(s) and full range of operation in all modes, including testing and adjusting relevant to operation.
- F. Explain use of control equipment, including settings, switch modes, available adjustments, reading of gages; and functions that must be serviced only by authorized factory representatives.
- G. Explain trouble shooting procedures.
1. Demonstrate commonly occurring problems.
 2. Note procedures which must be performed by personnel with special qualifications or licenses or by authorized factory representative with specified level of training.
- H. Explain maintenance procedures and requirements.
1. Point out items requiring periodic maintenance.
 2. Demonstrate typical preventive maintenance procedures and recommended typical maintenance intervals.
 3. Demonstrate other commonly occurring maintenance procedures not part of preventive maintenance program.
 4. Identify maintenance materials to be used.
 5. Review Agency obligations to maintain warranty.
- I. Furnish all tools required to properly demonstrate operations of systems.
- J. Do not leave site until instruction report is signed by Engineer.

END OF SECTION

SECTION 01710

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work includes:
 - 1. Furnish all labor, materials, tools, equipment and services for all cleaning as indicated in accordance with provisions of Contract Documents.
 - 2. Completely coordinate with all other Contract work.

1.02 FIRE PROTECTION

- A. Store volatile waste in covered metal containers.
- B. Remove from premises daily.

1.03 POLLUTION CONTROL

- A. Conduct cleanup and disposal operations to comply with local ordinances and anti-pollution laws.

PART 2 - PRODUCTS

2.01 CLEANING MATERIALS

- A. Use materials recommended by manufacturers of surfaces to be cleaned.
- B. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 GENERAL

- A. Clean all items installed under this Contract.
 - 1. Leave free of stains, damage, or defects prior to final acceptance.
 - 2. Include washing, sweeping, polishing of all finished wall surfaces, floors, windows, hardware, mirrors, lighting fixtures and items of equipment.
 - 3. Replace damaged or defaced items not acceptable to Engineer, to his satisfaction at no additional expense to Agency.

3.02 DURING CONSTRUCTION

- A. Clean up all waste materials, rubbish, and debris from project area and dispose of off site.
- B. Repair, patch, and touch-up marred surfaces to match adjacent finishes damaged by his own operations.
- C. Schedule cleaning operations so that contaminants resulting from cleaning do not fall on wet painted surfaces.
- D. Leave the Work "broom clean".

3.03 FINAL CLEANING

- A. Use experienced workmen or professional cleaners for final cleaning.
- B. At completion of construction, just prior to acceptance or occupancy, perform final cleaning.
- C. Remove dirt, stains, labels, protective films and foreign materials.
- D. Repair and touch-up marred areas.
- E. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from interior and exterior surfaces of fixtures, hardware, and equipment.

END OF SECTION

SECTION 01720

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work includes:
1. Furnish and maintain at the project site one complete set each of the Field Documents and the Project Record Documents (as defined under B-2 and B-3 below).
 2. Record revisions and actual as-built conditions as they occur on the Project Record Documents.
- B. Definitions:
1. Documents required for construction: A complete set of all documents required by the Contract Documents, including but not limited to:
 - a. Contract drawings.
 - b. Project manual/specifications.
 - c. Addenda.
 - d. Shop drawings.
 - e. Product data.
 - f. Project data.
 - g. Change orders.
 - h. Modifications.
 - i. Field test records.
 - j. Warranties.
 - k. Samples and mock-ups.
 - l. Project Schedule
 2. Field Documents: Complete set of all documents required for construction (defined above).
 - a. To be used for day to day construction of project.

3. Project Record Documents: Complete separate set of all documents required for construction (defined above) except samples and mock-ups.
 - a. To be used only for recording periodic changes to Contract Documents.
 - b. Do not use these documents for construction of project. Maintain Project Record Documents in a neat, clean condition.

1.02 SUBMITTALS

A. Final Submittals:

1. Submit Project Record Documents, at completion of project. Submit to Agency with letter of transmittal.
2. Provide transmittal letter containing:
 - a. Date.
 - b. Project title.
 - c. Contractor's name and address.
 - d. Title and number of each Project Record Document.
 - e. Certification that Project Record Documents submitted are complete and accurate.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 FIELD DOCUMENTS

- A. Maintain minimum of one copy at project site.
- B. Label each document "FIELD".
- C. These documents will be used for construction of project.
- D. Make documents available at all times for review by Engineer, Agency and authorities having jurisdiction.

3.02 PROJECT RECORD DOCUMENTS

- A. Maintain one copy at project site.
- B. Label each document "PROJECT RECORD".
- C. Do not use these documents for construction purposes other than to record periodic changes to Contract Documents.

- D. Make documents available at all times for review by Engineer, Agency and authorities having jurisdiction.
- E. Maintain in clean, dry, legible condition.
- F. Maintain Contract Drawings in stackable, enclosed file drawers designed to hold drawings horizontally.
 - 1. Provide index of contents of each file drawer on outside of drawer.
- G. Maintain all other Project Records in stackable, enclosed file boxes designed to hold specific type of document.
 - 1. Provide index of contents of each box on outside of box.

3.03 POSTING AND UPDATING OF PROJECT RECORD DOCUMENTS

- A. Post and update on weekly basis.
- B. Contract drawings: Mark legibly to record actual construction including but not limited to:
 - 1. Depths of various elements of foundations in relation to first floor level.
 - 2. Horizontal and vertical location of underground utilities and appurtenances referenced to permanent surface improvements.
 - 3. Location of internal (to building) utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - 4. Field changes of dimension and detail.
 - 5. Changes made by change order or other Agency instruction.
- C. Project Manual/Specifications: Type on each section to record all changes including but not limited to:
 - 1. Addenda.
 - 2. Change order or field order.
 - 3. Modifications to Contract.
 - 4. Bind added sections into Project Manual/Specifications.
 - 5. Indicate manufacturer, model or project number, size or capacity as applicable, color as applicable.
- D. Do not conceal work for which information must be recorded until all required information is recorded on Project Record Documents.
- E. Any work concealed prior to recording of required information must be uncovered at the Contractor's expense.

- F. Once all required information is recorded on Project Record Documents, restore work at Contractor's expense.

END OF SECTION

SECTION 01730

OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Work includes:
1. Furnish all labor, materials, tools, equipment and services for all operating and maintenance data as indicated in accordance with provisions of Contract Documents.
 2. Completely coordinate with all other Contract work.

1.02 SUBMITTALS

- A. Requirements for submittal:
1. Provide transmittal letter to Engineer containing:
 - a. Date.
 - b. Project title.
 - c. Contractor's name and address.
 - d. Title and number of data.
 2. Furnish two complete sets of operation and maintenance data to Engineer (as specified herein under Execution).

PART 2 - PRODUCTS

2.01 OPERATION AND MAINTENANCE MANUALS

- A. Assemble data indicated and other data required to completely describe operation and maintenance procedures.
- B. Assemble data in 3-ring white binders, each with 3 inch spine and clear sleeve on cover and spine. Completely index each binder with card stock indexing system identified by appropriate Construction Specifications Institute "Masterformat" specification section numbering system, with each item clearly labeled.
- C. Identify each item in manner consistent with names and identification numbers used in Contract Documents, not with manufacturer's catalog numbers.

- D. Neatly type or draft all data not furnished in printed form.
- E. Manufacturer's standard binding of data will not be acceptable.

2.02 DATA REQUIRED FOR EACH COMPONENT AND SYSTEM

- A. Sequence of operation:
 - 1. List valves, switches, etc., used to start, stop and adjust systems.
 - 2. Provide flow diagrams, control sequences and valve directory.
 - 3. Submit valve directory for review prior to inclusion in manual:
 - a. Show valve number, location.
 - b. List equipment controlled.
- B. Maintenance and trouble shooting data:
 - 1. All manufacturer furnished data.
 - 2. Project record wiring diagrams.
 - 3. Name and address of manufacturer.
 - 4. Name and address of local representatives who stock or distribute repair parts.
 - 5. List recommended spare parts and maintenance materials.
- C. Warranty information:
 - 1. Indicate applicable warranty and service period for each item in operation and maintenance data.

2.03 DATA REQUIRED FOR FINISH MATERIALS

- A. Maintenance data:
 - 1. Precautions necessary.
 - 2. Manufacturer's instructions and recommendations.
 - 3. Maintenance materials and tools required.
 - 4. Repair and/or replacement instructions.
 - 5. Name and address of manufacturer.
 - 6. Name and address of suppliers of materials, including local sources, if available.

PART 3 - EXECUTION

3.01 DELIVERY

- A. Deliver all items to Agency 90 calendar days preceding final Acceptance for review and use during systems demonstrations.
- B. Deliver all final and corrected items to Agency at time of final Acceptance.

END OF SECTION

SECTION 01750

SPARE PARTS AND MAINTENANCE MATERIALS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work includes:

1. Furnish all labor, materials, tools, equipment and services for all spare parts and maintenance materials as indicated in accordance with provisions of Contract Documents.

1.02 SUBMITTALS

A. Requirements for submittal:

1. Provide transmittal letter to Engineer containing: Date, project title, Contractor's name and address, Title, description and quantity submitted.
2. Provide products, spare parts, maintenance and extra materials in quantities specified in the individual specification sections.

PART 2 - PRODUCTS

2.01 SPARE PARTS AND TOOLS

A. Contractor shall package in clearly identified boxes all spare parts and tools required in the individual specifications sections.

1. Indicate manufacturer's name, part name and stock number, the piece of equipment by equipment number that each part or tool is for, and the name, address and phone number of closest supplier of the spare part or tool.

2.02 MAINTENANCE MATERIALS

A. Contractor shall package in clearly identified boxes in accordance with manufacturer's recommendations, all maintenance materials required in the individual specifications sections.

1. Indicate material trade name and stock number, which item material is to be used with, and the name, address and phone number of closest supplier.

2.03 EXTRA MATERIALS

- A. Contractor shall package in clearly identified containers, or install where indicated. In accordance with manufacturer's recommendations, all extra materials required to be provided in the individual specification sections.
 - 1. Indicate trade name, stock number, size, and color, where product is to be used, and the name, address and phone number of closest supplier.

PART 3 - EXECUTION

3.01 DELIVERY

- A. Deliver spare parts and materials at least 30 calendar days prior to final Acceptance.
- B. Deliver to a location at the project site and place in a location as directed by Engineer.

END OF SECTION