

SECTION 01300 - SUBMITTALS

1.0 DESCRIPTION

This Section covers requirements for submittals and forms a part of all other Specification Sections in which submittals are specified or required. Refer to the specific Sections and Divisions of the Specifications for additional submittal requirements.

A. Submittal Requirements Included In This Section

1. Number of submittal copies required.
2. Progress schedule.
3. Schedule of values.
4. Shop drawings.
5. Samples.
6. Materials lists and equipment data.
7. Instruction (operation and maintenance) manuals.
8. Installation instructions.
9. Record Drawings and Specifications.
10. Certificates.

B. Submittal Requirements Covered In the Conditions of the Contract and Other Sections

1. Applications for payments.
2. Schedule of testing laboratory services.
3. Written guarantees and warranties.
4. Manufacturers' certified reports.

2.0 SUBMITTAL-GENERAL REQUIREMENTS

Submit to the Owner for its review and approval technical data and drawings for all shop drawings, samples, materials lists, equipment data, software, assemblies and installations, test procedures, instruction manuals, record documents, manufacturers' equipment manuals, and other submittals required by the Technical Specifications. All such items required to be submitted for review shall be furnished by and at the expense of the Contractor and any work affected by them shall not proceed without such review. Properly prepare, identify, and transmit submittals and their contents as provided herein or as the Owner may otherwise direct. Except for record documents, test procedures, and instructional manuals for operation and maintenance, obtain submittal approval before the material or equipment covered by the submittal is delivered to the site. Contractor will not be paid for equipment or material delivered to the project site until the appurtenant submittals have been approved. Coordinate the progress schedule required under Section 01310 and the Special Provisions to this requirement.

- A. Submittal Review Time Allow no less than thirty (30) days for the review of submittals, not including the time necessary for delivery or mailing, and this time shall cause no delay in the Work. Extension of the Contract Time shall not be granted because of the Contractor's failure to make timely and correctly prepared and presented submittals with allowance for the checking and review periods. All submittals shall be completed within ninety (90) days after Notice to Proceed by the City, unless the Construction Manager accepts an alternate schedule for submission of submittals proposed by the Contractor. This time provision does not obligate the Construction Manager to approve submittals that may otherwise be deemed not acceptable.

- B. Deviations At the time of the submission, give notice in writing in the submittal of any deviation from the requirements of the Technical Specifications and Project Plans. Clearly indicate or describe the deviations, and reasons therefor, including all other changes required to correlate the Work. State in writing all variation in costs occasioned by the deviations and any assumption of the cost of all related changes if the deviation is approved. Requirements stated in Paragraph E below shall also apply.
- C. Number of Submittals Except for manufacturer's instruction manuals and samples, the Owner shall require and retain four (4) copies of all submittals, specified or required in this and all other Sections of these Specifications, for his and his representatives' use, unless otherwise specifically noted in a specific Specification section. Submit such additional number of copies, not to exceed four (4), to be reviewed and returned for your use. For submitted drawings 11 x 17 and larger, submittal of a reproducible copy set with two (2) sets of black-line printed copies is preferred and encouraged. Additional sets for the Contractor's use are not necessary in this case as the reproducible set will be returned to the Contractor marked to show the required corrections or approval.

The number of submittals required for manufacturer's instruction manuals and samples are described later in this Section.

- D. Method of Submittal Deliver submittals by means of separate, dated, signed, and sequence numbered transmittals, identifying as to initial or resubmittal status, and fully describing the submittal contents. Submittal documents common to more than one piece of equipment shall be identified with all the appropriate equipment numbers. Submittals for various items shall be made with a single form when the items taken together constitute a manufacturer's package or are so functionally related that expediency indicates checking or review of the group or package as a whole. Except as noted, do not combine in a single submittal equipment which is specified in one section of the Specifications with equipment specified in other Sections of the Specifications. Submittals are not acceptable directly from Subcontractors, suppliers, or manufacturers. In each transmittal state the Owner's Project Number and Name, Name and Address of Contractor, Name and Address of Subcontractor, Manufacturer, Supplier or Distributor as applicable, Plan Reference and Specification Section, Articles, and paragraphs to which the submittal pertains; identify accompanying data sheets, catalogs, and brochures in the same manner. Where several types or models are contained in the literature, delete non-applicable portions or specifically indicate which portions are intended and applicable. Fully index all items submitted in the transmittal letter.
1. Incomplete Submittals, including those not correctly transmitted, not correctly titled and identified, or not bearing the Contractor's review and approval stamp, shall be returned to the Contractor without review.
 2. Interrelated Submittals Except where the preparation of a submittal is dependent upon the approval of a prior submittal, simultaneously submit all submittals pertaining to the same class or portion of the Work.

During the preparation of submittals, informal communication and clarifications may be required between the Contractor and the City for exchange of technical information to assist and expedite preparation of complete submittals. As a result of this informal information exchange, certain minor refinements and revisions in the systems specified may be authorized informally by the City, but these shall not alter the scope of work or case increase or decrease in the Contract price. During this informal exchange, no oral statement by the City shall be construed to give formal approval of any component or method, nor shall any statement be construed to grant formal exception to, or variation from these Specifications.

- E. Contractor's Review and Approval All submittals shall be submitted as the instruments of the Contractor, who shall be responsible for their accuracy and completeness and coordination. Such responsibility shall not be delegated in whole or part to subcontractors or suppliers. These submittals may be prepared by the Contractor, subcontractors, or suppliers, but the Contractor shall ascertain that submittals meet all of the requirements of the Contract Documents. The Contractor shall insure that there is no conflict with other submittals and notify the Construction Manager in each case where its submittal may affect the work of another contractor or the City. The Contractor shall insure coordination of submittals among the related crafts and subcontractors.

On every submittal of shop drawings, samples, materials lists, equipment data, instruction manuals, and other submittals upon which the proper execution of the Work is dependent, mark with the Contractor's review and approval stamp certifying that (1) the submittal has been reviewed, checked, and approved and the contents have been coordinated with the requirements of the Work and the Technical Specifications and Project Plans including related Work, (2) all quantities, field measurements, field construction criteria, materials, equipment, catalog numbers, and similar data have been determined and verified, or that it shall be done, and (3) the Work covered by the submittal is recommended by the Contractor and the Contractor's guarantee shall fully apply thereto. The Contractor's stamp shall be dated and signed by the Contractor in every case.

- F. Review and Approval Submittals will be reviewed only for conformance with the design concept of the Project and with the information given in the Technical Specifications and Project Plans. The approval of a separate item as such shall not indicate approval of the assembly in which the item functions nor shall approval be construed as revising, in any way, the requirements for a fully integrated and operable system as specified. The approval of submittals shall not relieve the Contractor of responsibility for any deviation from the requirements of the Technical Specifications and Project Plans or for any revision in resubmittals unless the Contractor has given notice in writing of the deviation or revision at the time of submission or resubmission and written approval has been given to the specific deviation or revision. The approval of submittals shall not relieve the Contractor of responsibility for errors or omissions in the submittals or for the accuracy of dimensions and quantities, the adequacy of connections, and the proper and acceptable fitting, execution, and completion of the Work.
- G. Form of Approval Review of submittals has as its primary objective the completion for the City of a project in full conformance with the Contract Plans and Specifications, unmarred by field corrections, and within the time provided. In addition to this primary objective, submittal review as a secondary objective will assist the Contractor in its procurement of equipment that will meet all requirements of the project Plans and Specifications, will fit the structures detailed on the Plans, will be completed with respect to piping, electrical, and control connections, will have the proper functional characteristics, and will become an integral part of a complete operating facility.

After review by the Design Consultant of each of the Contractor's submissions, the material will be returned to the Contractor with actions defined as follows:

1. NO EXCEPTIONS NOTED (RESUBMITTAL NOT REQUIRED) - Accepted subject to its compatibility with future submissions and additional partial submissions for portions of the work not covered in this submission. Does not constitute approval or deletion of specified or required items not shown in the partial submission.
2. MAKE CORRECTIONS NOTED (RESUBMITTAL NOT REQUIRED) - Same as 1, except that minor corrections as noted shall be made by the Contractor.

3. AMEND AND RESUBMIT- Rejected because of major inconsistencies or errors which shall be resolved or corrected by the Contractor prior to subsequent review by the Design Consultant.
4. NOT ACCEPTABLE (RESUBMIT) - Submitted material does not conform to Plans and Specifications in major respect (i.e., wrong size, model, capacity, or material).

Items 1 and 2 above (no resubmittal required) are considered "favorable review". Items 3 and 4 above (correction and resubmittal required) are considered "unfavorable review".

It shall be the Contractor's responsibility to copy and/or conform reviewed submittals in sufficient numbers for its files, subcontractors, and vendors.

- H. Corrections and Resubmittals Make all required corrections and resubmit the required number of corrected submittals until approved by the Owner. Direct specific attention in writing to revisions other than the corrections called for by the Owner on previous submittals, and state in writing all variations in costs and your assumption of the cost of related changes the same as is required for deviations in 2.0B. Identify each resubmittal with number of the original submittal followed by consecutive letters starting with "A" for first resubmittal, "B" for second resubmittal, etc. The Owner reserves the right to deduct moneys from the amounts due the Contractor to cover the cost of its review time for any and all submittals beyond the second submission.
- I. Check of Returned Submittals Check returned submittals for correction and ascertain if the corrections result in extra cost above that included under the Technical Specifications and Project Plans, and give written notice to the Owner within five days if, in your opinion, such extra cost results from corrections. By failing to so notify the Owner or by starting any Work covered by a submittal, all claims for extra costs resulting from required corrections are waived.
- J. Conformance Do not purchase, fabricate, deliver, construct, or commence any Work represented by required submittals until the applicable submittal has been approved. Conform Work to the approved submittals and all other requirements of the Technical Specifications and Project Plans unless subsequently revised by contract change order, in which case prepare and submit revised submittals as may be required. Do not proceed with any related Work which may be affected by the Work covered under submittals until the applicable submittals have been approved, particularly where piping, machinery, equipment, concrete work and the required arrangements, embedments and clearances are involved.
- K. Piecemeal Submittals Except for reinforcing steel submittals, piecemeal submittals shall be returned unreviewed. However, for mechanical equipment and the like, separate submittals for embedded items, embedded metal work and anchors shall be reviewed.

3.0 SCHEDULE OF VALUES

Submit to the Owner for acceptance, in the form directed by or acceptable to the Owner, a complete schedule of the values of the various portions of the Work to coincide with the construction schedule, including quantities and unit prices aggregating the Contract Price (except in cases and to the extent that accepted unit prices form the basis for payment). In the schedule, subdivide the Work into component parts in sufficient detail to serve as the basis for progress payments during construction and to coordinate with the progress schedule required for this Work. Provide support data to substantiate its correctness as required by the Owner. Include with each item in the schedule of values, its proper share of overhead and profit. An unbalanced breakdown providing for overpayment to the Contractor on items of Work which would be performed first will not be approved. The schedule of values, when accepted by the Owner, shall be used only as a basis for the Contractor's applications

for payment and not for additions to or deductions from the Contract Price. Provide the initial submittal for the schedule of values at the preconstruction conference as per Section 01200.

4.0 PROGRESS SCHEDULE

Refer Section 01310, Construction Schedule.

5.0 SHOP DRAWINGS

Many of the SCADA system requirements shown and specified in the Contract Documents are functional in nature and do not show the exact locations, dimensions, or other detailed features of equipment. The Contractor, as part of his work, shall prepare detailed installation and construction drawings as specified below.

Each submittal shall be complete with respect to dimensions, design criteria, materials, connections, bases, foundations, anchors, and the like, and shall be accompanied by technical and performance data as necessary to fully illustrate conformance with the Technical Specifications and Project Plans. Provide the number of submittal sets as indicated in paragraph 2.0C of this Section.

- A. Title Block and Identification On each shop drawing, provide a space for the Engineer's approval or correction stamp and a title block showing the following:
1. Name and address of Contractor.
 2. Name and address of Subcontractor, manufacturer, supplier, or distributor, as applicable.
 3. Name and address of Owner.
 4. Date, scale of drawings, and identification number.
 5. Revision date, number, and brief description.
 6. Contractor's review and approval stamp.
 7. Owner's Number.
 8. Plan Reference and Specification Section reference.
 9. Project Name.
- B. Preparation and Size Details and information shall be clearly drawn, dimensioned, noted, and cross referenced. Unless otherwise approved, prepare shop drawings of the same size as the Contract Drawings or on 8-1/2 by 11 inch or 11 x 17 inch sheets as applicable. Maximum sheet size shall be 22 inches by 34 inches. Refer to Paragraph 2.0C above regarding use of a reproducible copy set for the larger drawings.
Submittal and record drawings shall be drafted and submitted in AutoCAD with two copies of half sheet drawings and a magnetic media copy on 3 1/2 high density (1.44 MB) disks.
- C. Data Unless the following data is included in the instruction manuals or equipment data submitted prior to or with the shop drawings, submit with the shop drawings complete catalog

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and technical data for all manufactured products, materials, machinery, and equipment covered by the shop drawing submittal. Include data showing for each item, as applicable, the following information:

1. Manufacturer's specifications and details.
 2. Applicable technical data and performance curves.
 3. Preparation, assembly, and installation instruction with allowable tolerances.
 4. Connection requirements.
 5. Pre-start-up servicing and operating methods.
 6. Other data and information necessary to demonstrate that the proposed items conform to the Technical Specifications and Project Plans.
- D. Information Required Shop drawings shall contain details and information fully developing the pertaining Technical Specifications and Project Plans requirements and such other information as may be specified or required for approval, including but not limited to:
1. Related work with cross references to applicable portions of the Technical Specifications and Project Plans.
 2. Dimensions including variations between indicated dimensions and actual conditions.
 3. Physical configurations with critical dimensions for clearance, access, and servicing.
 4. List of materials including fasteners and connectors.
 5. Structural construction and assemblies, welds shown by AWS symbols, and each fastener and connector shown by type and class.
 6. Grouting work, including grouting space and material.
 7. Concrete foundations and bases for machinery and equipment including joints, joint filler and sealer, and reinforcing.
 8. Anchor bolt details showing type and class, sizes, embedments, projections, and locations measured with respect to permanent structural features. An anchor bolt template shall be shown on the Shop Drawings and shall be furnished unless waived in writing by the Owner.
 9. Protective coatings and factory finishes fully described as to materials, number of coats, plated and metallic coating finishes, treatments, and similar information, all based on specified requirements. The term "as specified" is not acceptable for this purpose.
 10. Machinery and equipment details. Standard catalog items need not be illustrated in detail, but indicate and detail sizes, supports, and connections.

11. Location of auxiliary items that are parts of machinery and equipment including sight glasses, petcocks, gauges, lubrication fittings and access, and maintenance monitoring devices.
 12. Piping systems and piping including layout, fittings, valves, appurtenances, hangers and supports, and sleeves.
 13. Electrical equipment showing plans, elevations, sections, arrangements, materials, anchor bolts, supports, weights, wiring and circuit diagrams, internal connections, busses, grounding, conduit spaces, layout of instruments, gages, meters, and other components. Diagrams shall carry a uniform and coordinated set of wire numbers and terminal block numbers to permit cross-referencing between the contract document drawings, the drawings prepared by the Contractor's installer, and equipment Technical Manual Drawings. Drawing number cross-referenced shall be provided.
 14. Written descriptions fully describing the operation of all control circuits, start-up sequencing, shut down sequencing and alarms.
 15. Underground duct banks showing typical details of conduits, joints, spacers, and means of securing conduits in place during concrete placement.
 16. Dielectric connections, and materials and methods to be used to isolate aluminum from dissimilar materials.
 17. Full-size lettering layouts for data plate and nameplate inscriptions.
- E. Details and Connections Satisfactorily detail all connections required to complete the Work, including details necessary to make indicated or specified additions to existing work or to provide connections for future work. Design connections and parts of strength to withstand, without adverse deflection or stress, all loads or pressures to which they may be subjected and to develop the strength of the members or parts connected. In no case shall the connections, parts, or details be inferior to those required by the Technical Specifications or Project Plans.
- F. Related Work The term "by others" is not acceptable for the description of related work shown in the shop drawings. Clearly note by name or description the Contractor, Subcontractor, or trade to provide such related Work; where such name or description is missing, it shall be understood and agreed that the Contractor is to furnish and install such related Work.
- G. Clearances Do not proceed with any related Work that may be affected by piping, machinery, equipment, or other work therein until shop drawings and data showing all components with acceptable clearances have been approved.
- H. Composite Shop Drawings With Installation Layouts Prepare and submit drawings, wherever specified or required, to resolve tight or conflicting field conditions. Show dimensional plans and elevations of the materials or equipment of all trades in the involved area or space, and include complete information as to arrangements, locations, clearances, avoidance of interferences, access, sizes, supports, connections, services, assembly, disassembly, and installation. Composite shop drawings and layouts shall be coordinated in the field by the Contractor and his Subcontractors for proper relationship to the Work of all trades, based on field conditions, and shall be checked and approved by them before submittal. Contractor shall have competent technical personnel readily available for such coordinating and checking.

6.0 SAMPLES

Where samples are required in any of the following Specification Sections, unless otherwise specified, each sample submittal shall include two sets of samples. One set of approved samples and all disapproved samples shall be returned to the Contractor. Samples of value retained by the Owner shall be returned to the Contractor after completion of the Work if the Contractor's first transmittal of the sample requests its return. Approved samples of manufactured items returned to the Contractor may be installed in the Work if the location is recorded and the samples bear temporary identification as such.

- A. Identification Label or tag each sample or set of samples identifying the manufacturer's name and address, brand name, catalog number, intended use and other data as required by these Specifications.
- B. Colors, Patterns, and Textures For items required to be of selected and approved colors, patterns, textures, or other finish, submit sufficient samples to show the range of shades, tones, values, patterns, textures, or other features corresponding to the instructions and requirements specified.
- C. Field-Applied Paint and Coatings Submit samples of finishes at least 60 days prior to start of such finishing operations in conformance with requirements specified in Section 09900, Painting and Protective Coatings.
- D. Factory Finish Colors Colors of material specified to be furnished with a factory finish are subject to approval. Submit duplicate samples of factory finishes showing the full range of available colors for selection and approval when requested by the Owner.

7.0 MATERIALS LISTS AND EQUIPMENT DATA

Within thirty (30) days after the Notice to Proceed, the Contractor shall submit a List of Materials to the Construction Manager for review. The List shall include all items of equipment and materials for mechanical, piping, architecture, electrical, heating and ventilating, equipment piping, and plumbing work; and the names of manufacturers with whom purchase orders have been or will be placed. Items on the List shall be arranged in the same order as in these Specifications, and shall contain sufficient data to identify precisely the items of material and equipment the Contractor proposes to furnish. The List shall include the Specifications or Drawing references. After the submission is favorably reviewed and returned to the Contractor by the Construction Manager, it shall become the basis for the submission of detailed manufacturer's drawings, catalog cuts, curves, diagrams, schematics, data, and information on each separate item for review as set forth elsewhere in the Contract Documents. The favorable review of shop drawings shall be obtained prior to the fabrication, delivery and construction of items requiring shop drawing submittal.

In determining acceptability, consideration shall be given to the availability of maintenance and replacement parts and materials, the availability of manufacturer's technical representatives, other factors that relate to the maintenance and repair of installed items without excessive inconvenience to the Owner, guarantees and warranties, as well as determination of conformance with the Technical Specifications and Project Plans.

- A. Materials Furnished Under Standard Specifications For materials specified by reference to standard or reference specifications, prepare and submit for approval a list of such materials by manufacturer's names and identifications to the extent requested by the Owner.

- B. Material Lists Neatly bind submittal copies with sturdy labeled covers. Copies shall contain an index listing the contents. Loose submittals shall be returned unreviewed. For each item listed, include the manufacturer's name and address, trade or brand name, local supplier's name and address, catalog numbers and cuts, brochures, terms and conditions of manufacturer's guarantee and warranty, other information to fully describe the item, and supplementary information as may be required for approval. Mark cuts, brochures, and data to indicate the items proposed and the intended use. Provide the number of submittal sets as specified in Paragraph 2.0C above.
- C. Equipment Data Submit complete technical and catalog data for every item of mechanical and electrical equipment and machinery to be incorporated in the Work, including components. Submittal copies shall be bound, indexed, and contain information as required in paragraph 7.0B for submittal of materials lists and shall further include specific information on performance and operating curves and data, ratings, capacities, characteristics, efficiencies, and other data to fully illustrate and describe the items as may be specified or required for approval, in particular, equipment incorporating logic circuits shall have a draft of a detailed theory of operation. Data shall be submitted in sets covering complete systems or functioning units. The number of submittal sets required shall be as specified in Paragraph 2.0C above.
- D. Foreign Materials Materials which are manufactured, produced or fabricated outside of the United States shall be delivered to a distribution point in Stockton, unless otherwise required in these specifications or the special provisions, where they shall be retained for a sufficient period of time to permit inspection, sampling, and testing.

Attention is directed to the provisions in Section 00700-6.5 Liquidated Damages. The Contractor shall not be entitled to an extension of time for acts or events occurring outside of the United States and it shall be the Contractor's responsibility to deliver materials obtained from outside of the United States to the point of entry into Continental United States in sufficient time to permit timely delivery to the job site.

The Contractor, at no cost to the City, shall supply the facilities and arrange for any testing required in Stockton which the City is not equipped to perform. All testing by the Contractor shall be subject to witnessing by the City.

The manufacturer, producer or fabricator of foreign material shall furnish to the City a Certificate of Compliance. In addition, certified mill test reports clearly identifiable to the lot of material shall be furnished where required in these specifications or otherwise requested by the City.

8.0 INSTRUCTION MANUALS

Obtain data from the various manufacturers and submit instruction (operation and maintenance) manuals covering all mechanical and instrumentation equipment and machinery installed in the Work.

- A. Contents Each manual shall have an index listing the contents. Information in the manuals shall include not less than:
1. General, introduction and overall equipment description, purpose, functions, and simplified theory of operation.
 2. Specifications.

3. Installation instructions, procedures, sequences, and precautions, including tolerances for level, horizontal, and vertical alignment.
4. Grouting requirements including grout spaces and materials.
5. List showing lubricants for each item of mechanical equipment, approximate quantities needed per year, and recommended lubrication intervals; where possible, types of lubricants shall be consolidated with equipment manufacturers' approval to minimize the number of different lubricants required for plant maintenance.
6. Start-up and beginning operation procedures.
7. Operational procedures.
8. Shut down procedures.
9. Short and long term inactivation procedures.
10. Maintenance, calibration, repair and rebuild instruction.
11. Parts lists and spare parts recommendations.
12. Lists of all special tools, instruments, accessories, and special lifting and handling devices required for periodic maintenance, repair, adjustment, and calibration.
13. Wiring diagrams and detailed circuit operation description.
14. Performance curves and data.
15. Other information as may be specified or required for approval.

In addition to the above information, the Contractor, with the assistance of the respective equipment manufacturer, shall complete and include as part of the instruction manual for all equipment and machinery, the City of Stockton's "Preventative Maintenance Modification/Addition Request Form." A copy of the subject form is included at the end of this Section for information. Both pages of the entire form must be completed by the Contractor. Clean copies of this form will be provided to the Contractor for his use. A copy of the City of Stockton's "PM Procedure Number and Description Report" will be provided to the Contractor and is to be used in completing the aforementioned form.

B. Format and Organization

1. Use drawings and pictorials to illustrate the printed text as necessary to fully present the information.
2. Where information covers a family of similar items of equipment, identify the applicable portions by heavy weighted arrows, boxes or circles, or strike-out the inapplicable information. Non-conforming data are not acceptable and shall be returned for rework and resubmittal. The submittal cover should state the method used to identify the applicable portions.
3. Incorporate into books all Manufacturers' Equipment Manuals including those specified in pertinent Sections of the Specifications. These books shall be organized by Equipment

Class in same manner and sequence as the Specifications, i.e. Mechanical, Electrical, Instrumentation, etc. Book size and quantity shall be sufficient for inclusion of all data, and be of type and quality hereinafter specified in Paragraph 8.0C below.

4. Within each book of manuals, provide a Table of Contents for that book. If more than one book is necessary for a Class of Equipment, place a complete Table of Contents for that Class of Equipment within each book of that Class.
5. In addition, an overall Index of Contents shall be prepared in the same number of sets as required below for the final manuals and submitted separately to the Owner for his insertion in the Operation and Maintenance Manuals.
6. When a manufacturer's manual exceeds one inch in thickness and is bound as specified in Paragraph 8.0C it need not be rebound within another book, but the Overall Index shall refer to it by title and indicate that it is bound separately.
7. Electronic assembly drawings: Detailed circuit schematics, circuit board drawings, and chassis layouts shall be provided for all electrical and electronic equipment as part of the submittal. The circuit schematics, circuit board drawings, and chassis layouts shall clearly show, locate, and identify all components and component wiring. Circuit boards and circuit board components shall be identified by the original manufacturer's name and part number. Component values and tolerance shall be shown.
8. Drawings: Preprinted drawings provided by manufacturers of off-the-shelf equipment may be used if the drawings are an integral part of an offset printed O&M Manual, are not larger than 11-inches by 17-inches, are clearly legible when reproduced using conventional office copying machines, and, in the opinion of the Construction Manager, satisfy the requirement of these specifications. One reproducible of the O&M Manual drawing original must be supplied for each O&M Manual drawing larger than 11-inches by 17-inches, and must satisfy all drawing requirements specified herein. Those preprinted O&M Manual drawings, which are not acceptable, or which must be modified or corrected to show the actual as-built design, shall be redrawn as new specially-prepared shop drawings. Acceptable equipment manufacturer's drawings incorporated into equipment operating and maintenance manuals need not be duplicated or removed from the manuals.

C. Manual Binding

1. Bind all materials in sturdy three-ring loose leaf binders designed to provide full view opening and ease of making content additions or replacements. Maximum binder size shall be three (3) inches, with this binder size containing not more than 2¹/₂ inches of material. Binders of smaller thickness shall contain correspondingly less material. All bound material shall be three-hole punched, loose material shall not be permitted. Prints larger than 11 x 17 inches shall be inserted into a clear plastic cover envelope equipped with a three-hole tab on one edge suitable for inserting in the above described binders.
2. Permanently label face of cover and bound edge of each book "MANUFACTURERS' INSTRUCTION MANUAL," and indicate Class of Equipment, i.e., Mechanical, Electrical, Instrumentation, etc. or name specific equipment if a single unit is contained. Where more than one book is needed for a Class of Equipment or a single specific equipment unit, number books consecutively BOOK I, BOOK II, etc.
3. If more than one Class of Equipment is contained in a book, separate each class with a tabbed stiff divider insert page.

4. Prior to purchase or delivery, submit samples of each intended type of binder and obtain approval from the Owner.

D. Manual Submittals Submittals shall include three (3) complete copies of each manual, one of which shall be returned to the Contractor marked to show the required corrections or approval. ~~When approved, the Contractor shall deliver four (4) sets of unmarked (without review comments) manuals to the Owner. The Contractor shall submit preliminary instruction manuals at least ten (10) days prior to the start of Factory Acceptance test.~~

Deleted:

In addition to the above information, the Contractor, with the assistance of the respective equipment manufacturer, shall complete and include as part of the instruction manual for all equipment and machinery the City of Stockton's "Preventive Maintenance Modification/Addition Request Form". A copy of the subject form is included at the end of this Section for information. Only those line items marked with a "C" must be completed by the Contractor. A copy of the City of Stockton's "PM Procedure Number and Description Report" will be provided to the Contractor and is to be used in completing the aforementioned form.

9.0 INSTALLATION INSTRUCTIONS

In addition to the instructions submitted under the above Section 8.0, submit copies of manufacturers' installation instructions for material and equipment incorporated in the Work to the extent specified in other Sections and Divisions of the Specifications or requested by the Owner for its review. Installation instructions shall be reviewed for general adequacy only. After review, the Contractor shall distribute copies to all those involved with the instructions.

10.0 CITY PERSONNEL TRAINING PLAN

The Contractor shall submit a training plan at least fourteen (14) days prior to the start of any required City personnel training. Training plans shall describe the training course objectives, the scope of subjects to be covered, course outline including approximate time devoted to each subject, course materials to be provided by the Contractor, training aids to be used and training methods to be used (lecture, demonstration, student practice, etc.). The submittal shall include resumes for instructors of each class demonstrating the instructor's qualifications.

11.0 OTHER SUBMITTALS

Provide copies of other submittals such as calculations, manufacturer's certified reports, operational demonstration and system validation reports specified in other Sections and Divisions of the Specifications.

12.0 STORAGE INSTRUCTIONS

For each equipment and material item furnished, provide for the Owner's records two (2) copies of the manufacturer's recommended instructions for storage of the respective equipment or material. The instructions shall address conditions both before installation and (for mechanical, electrical and instrumentation equipment) after installation but before placing into continuous operation. Submit manufacturer's storage instructions either prior to delivery of the material/equipment or with the

request for payment of materials delivered. Payment for materials delivered shall not be approved without submittal of the manufacturer's storage instructions.

13.0 TOOLS, ACCESSORIES, SPARE PARTS, AND MAINTENANCE MATERIALS

Furnish and deliver all special tools, instruments, accessories, spare parts, and maintenance materials required by the Technical Specifications and Project Plans, and furnish and deliver the special tools, instruments, accessories, and special lifting and handling devices shown in the approved instruction manuals. Unless otherwise specified or directed, deliver the items to the Owner, with the Contractor's written transmittal accompanying each shipment, in the manufacturers' original containers labeled to describe the contents and the equipment for which it is furnished. Where specifically required in the Section covering the material, furnish a metal cabinet to house this equipment.

Provide spare parts and special tool lists. The list shall show the manufacturer's/supplier's name, address, and telephone number, the quantity of spare parts and special tools required for each item of equipment provided under division 17, and the current list price of each.

14.0 RECORD DRAWINGS AND SPECIFICATIONS

Maintain one record copy of all Drawings, Specifications, Addenda, Modifications, approved submittals, correspondence, and transmittals at the site in good order and readily available to the Owner. Clearly and correctly mark the Record Drawings and the Record Specifications annotated to show all changes made during the construction process at the time the changed Work is installed. No such changes shall be made in the Work unless previously authorized by a Modification or by specific approval of deviations or revisions in submittals.

- A. Buried and Concealed Work Record the precise location of all piping, conduits, ducts, cables, and like Work that is buried, embedded in concrete or masonry, or concealed in wood or metal framed walls and structures at the time such Work is installed and prior to concealment. Each feature of the concealed Work, such as the beginning and end of straight runs, radius center point of curved runs, angles, connections, plugged tees or other fittings for future connections, and like items shall be accurately located by not less than two dimensions to permanent structures. The depth below finish grade, slab, or paving shall be noted for buried pipe, conduit, or ducts at the beginning and end of straight grade runs and at all grade change points, excepting sewer or drain lines run between manholes. Should the Contractor fail to record such buried or concealed Work, he shall uncover the unrecorded Work to the extent required by the Owner and shall satisfactorily restore and reconstruct the removed Work with no change in the Contract Price or the Contract Time.
- B. Delivery Upon completion and prior to final inspection of the Work, and as a condition of final payment, submit the Record Drawings and Specifications to the Owner for review, and make such revisions or corrections as may be necessary for them to be a true, complete, and accurate record of the Work in the opinion of the Owner. When approved, the Contractor shall deliver the Record Drawings and Specifications to the Owner.

15.0 REVISION OF SUBMITTALS

Whenever a contract change order causes a change to the information contained in previously approved submittals, submit information and data corresponding to the changed requirements for approval. Submit revisions following the procedure required for previously approved submittals.

16.0 CERTIFICATES

Each certificate required under the Contract or in any of the following Sections shall be signed by the individual, office, or agent lawfully authorized to execute the certificate, and such authority shall be cited in the certificate by title, description, or other acceptable evidence. All certificates shall be sworn as to the correctness and validity of the contents. Where specifically required in the respective section, certificates shall be notarized and duplicate copies of required certificates shall be notarized to be true copies.

A Certificate of Compliance shall be furnished prior to the use of any materials for which these specifications or the special provisions require that such a certificate be furnished. In addition, when so authorized in these specifications or in the special provisions, the Engineer may permit the use of certain materials or assemblies prior to sampling and testing if accompanied by a Certificate of Compliance. The certificate shall be signed by the manufacturer of the material or the manufacturer of assembled materials and shall state that the materials involved comply in all respects with the requirements of the specifications. A Certificate of Compliance shall be furnished with each lot of material delivered to the work and the lot so certified shall be clearly identified in the certificate.

All materials used on the basis of a Certificate of Compliance may be sampled and tested at any time.

The fact that material is used on the basis of a Certificate of Compliance shall not relieve the Contractor of responsibility for incorporating material in the work which conforms to the requirements of the plans and specifications and any such material not conforming to such requirements will be subject to rejection whether in place or not.

The City reserves the right to refuse to permit the use of material on the basis of a Certificate of Compliance.

The form of the Certificate of Compliance and its disposition shall be as directed by the Construction Manager.

17.0 EARTHQUAKE DESIGN AND RESTRAINT

Design, construct and attach all manufactured equipment supplied under this Contract, and as noted in the respective technical Sections, to resist stresses produced by seismic forces specified in this Section. Rigidly attach equipment that does not vibrate during normal operation. For equipment that vibrates during normal operation, attach by means of isolators with mechanical stops that limit movement in all directions unless it can be demonstrated by calculations that such stops are not required. Restrain equipment or portions of equipment that move during normal operation with mechanical devices that prevent displacement unless it can be demonstrated by calculations that such restraints are not required.

- A. Work Included The work included in this Paragraph includes, but is not limited to, the following:
All electrical equipment, cabinets and casework plus contents, electrical panels and lighting fixtures.
- B. Minimum Earthquake Forces Except as provided herein, base calculations on the minimum earthquake forces prescribed for Essential Facilities by the 1994 Edition of the Uniform Building Code as published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601.
- C. Include calculations with submittals of shop drawings, details and data specified in respective technical Sections of these Specifications.

18.0 CONSTRUCTION PHOTOGRAPHS

The Contractor shall provide construction photographs showing the regular progress of the work. All photographs shall be taken by a commercial photographer on 4 by 5-inch, 6 by 6 cm, or 6 by 7 cm color negative film, and shall indicate the date and the job title, photograph identification, and direction the camera was facing.

Starting when the work begins and continuing for as long as the work is in progress, not less than 12 exposures consisting of different subjects or angles of view each time, shall be taken from different locations in the project at intervals not exceeding one month apart. All photographs, with negatives, shall be furnished to the Construction Manager within two weeks after each exposure. At the beginning of the work and at six month intervals thereafter, at least four aerial photographs shall be taken. These aerial photographs shall be taken at an approximate scale or elevation agreed upon between the Contractor and the Construction Manager. Four 8 by 10-inch color prints, with negatives, of each aerial photograph shall be delivered to the Construction Manager.

Upon completion of the work, an additional 20 exposures, shall be made of the work as directed by the Construction Manager. Four glossy 8 by 10-inch color prints of each exposure, with all negatives, shall be made and delivered to the Construction Manager.

Field Code Changed

No additional compensation shall be provided for construction photographs and all costs therefor shall be included in the overall bid for construction of the project.

**** END OF SECTION ****

PREVENTIVE MAINTENANCE

MODIFICATION/ADDITION REQUEST FORM

(Please circle one : modification or addition)

Equipment Tag No. _____ Date : _____

Equipment Name :

Describe Modification(s) [New equipment-complete other side also]:

Justify Modifications(s):

Submitted By: _____

Concurrence : _____ and _____
Senior Plant Operations Supervisor Senior Plant Maintenance Supervisor

(DO NOT WRITE BELOW THIS LINE)

Deputy Director, Wastewater Division

DATE

- ___ Added / Deleted Tasks Entered :
- ___ Added / Deleted Equipment
- ___ Posted Additions / Deletions
- ___ Del. : checked pending Work Orders
- ___ Del. : pulled file
- ___ Del. : notified Tech Services _____ By :

DATE LAST PERFORMED : List the last date this task was performed. If this task has yet to be performed, write DUE in this space.

Submittals
01300 - 18

5/97