

**SAN BERNARDINO COUNTY
FIRE STATION 305 METAL BUILDING**

**8331 Caliente Road
Hesperia, CA 92344**

Project No. 10.10.1200

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SECTION 01 3000 SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. This Section includes administrative and procedural requirements for submittals required for performance of the Work, including the following:
 - 1. Contractor's Construction Schedule.
 - 2. Product Data.
 - 3. Samples.
- B. Administrative Submittals: Refer to other Division 1 Sections and other Contract Documents for requirements for Administrative Submittals. Such submittals include, but are not limited to, the following:
 - 1. Permits.
 - 2. Applications for Payment.
 - 3. Payment Bonds.
 - 4. Insurance Certificates.
 - 5. List of Subcontractors.
- C. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Section 01 3100 - "Coordination" specifies requirements governing preparation and submittal of required coordination drawings.
 - 2. Section 01 4500 - "Quality Control" specifies requirements for submittal of inspection and test reports.

1.02 DEFINITIONS

- A. Coordination Drawings show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or to function as intended.
 - 1. Preparation of coordination drawings is specified in Section 01 3100 - "Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
- B. Field Samples are full-size physical examples erected on-site to illustrate finishes, coatings, or finish materials. Field samples are used to establish the standard by which the work will be judged.
- C. Mockups are full-size assemblies for review of construction, coordination, testing or operation; they are not Samples.

1.03 SUBMITTAL PROCEDURES

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Processing: To avoid the need to delay installation as a result of the time required to process submittals, allow sufficient time for submittal review, including time for resubmittals.
 - a. Allow one (1) weeks for initial review. Allow additional time if the Architect must delay processing to permit coordination with subsequent submittals.
 - b. If an intermediate submittal is necessary, process the same as the initial submittal.
 - c. Allow one (1) weeks for reprocessing each submittal.
 - d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the work to permit processing.
- B. Submittal Transmittal: Package each submittal appropriately for handling. Transmit each submittal from the Contractor to the Architect using a transmittal form, including Job Name, Specification Section Number and Required Lead-Time. The Architect will not accept submittals received from sources other than the Contractor.

1.04 CONTRACTOR'S CONSTRUCTION SCHEDULE

- A. Submit five (5) copies of the Construction Schedule, broken down by trade and activity, to the Owner for approval. Schedule shall be by CPM, and shall show proposed starting and completion dates for each trade and activity for the work. Submit five (5) copies of the updated schedule at each Application for Payment review to the Architect.
 - 1. Within each time bar, indicate estimated completion percentage in 10 percent increments. As work progresses, place a contrasting mark in each bar to indicate Actual Completion.
- B. Submit completed Construction Schedule to Owner no later than 5 calendar days after the date established for "Notice to Proceed", and update monthly during construction. Submit current schedule with each Application for Payment.
- C. Distribution: Following response to the initial submittal, print and distribute copies to the Architect, Owner, Subcontractors and other parties required to comply with scheduled dates. Post copies in the Project Meeting Room and temporary field office.
- D. Submit completed material delivery schedule to the Architect no later than 5 calendar days after the "Notice to Proceed". Identify material critical to the progress of the Project and those for which long lead-time in procurement is anticipated. Indicate projected dates for submittal, order and delivery of such material.

1.05 SAFETY AND HEALTH PROGRAM

- A. Provide a Health and Safety Plan per local agency requirements.

1.06 SHOP DRAWING SUBMITTAL SCHEDULE

- A. After development and acceptance of the Contractor's Construction Schedule, prepare a complete Schedule of Submittals. Submit the Schedule within 5 days of the date required for submittal of the Contractor's Construction Schedule.

1.07 SHOP DRAWINGS (SUBMITTALS)

- A. Submit newly prepared information drawn accurately to scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not a Shop Drawing.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
 - 1. Job Name.
 - 2. Location.
 - 3. Dimensions.
 - 4. Notation of dimensions established by field measurements.
 - 5. If Shop Drawings are rejected twice by the Architect and a third submittal is required, the General Contractor will be billed \$215/hour for review time.

1.08 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams, and performance curves.
- B. A copy of manufacturer's installation instructions and warranty literature shall be provided for all products at time of Shop Drawing submittal. However, this submission shall not relieve the Contractor's duty to assemble warranty manuals and installation literature at the end of the project. Refer to Section 01 77 00 - "Closeout Procedures".

1.09 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches showing color, texture and pattern.
 - 1. Submit samples for review of size, kind, finish, color, pattern and texture. Submit samples for a final check of these characteristics with other elements and a comparison of these

characteristics between the final submittal and the actual component as delivered and installed.

- a. Where variation in color, pattern, texture or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show approximate limits of the variations.
2. Maintain sets of Samples, as returned, at the project site, for quality comparisons throughout the course of construction.

1.10 ARCHITECT'S ACTION

- A. Except for submittals for the record or information, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return.
 1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Architect will stamp each submittal with a uniform, action stamp. The Architect will review each submittal, mark to indicate action taken, and return.
 1. Final Unrestricted Release: When the Architect marks a submittal "No Exception Taken", the work covered by the submittal may proceed provided it complies with requirements of the Contract Documents.
 2. Final-but-Restricted Release: When the Architect marks a submittal "Make Corrections Noted", the work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents.
 3. Returned for Resubmittal: When the Architect marks a submittal "Rejected", "Revise and Resubmit" do not proceed with work covered by the submittal, including purchasing, fabrication, delivery or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat if necessary to obtain different action mark.
 - a. Do not use, or allow others to use, submittals marked "Rejected", "Revise and Resubmit" at the project site or elsewhere where work is in progress.
- C. Unsolicited Submittals: The Architect will return unsolicited submittals to the sender without action.

1.11 DAILY CONSTRUCTION REPORTS

- A. Prepare a Daily Construction Report recording the following information concerning events at the site, and submit duplicate copies to the Owner's Representative and Architect at on a weekly basis.
 1. List of Subcontractors at the site.
 2. Approximate count of personnel at the site.
 3. High and low temperatures, general weather conditions.
 4. Accidents and unusual events.
 5. Meetings and significant decisions.
 6. Stoppages, delays, shortages and losses.
 7. Emergency procedures.
 8. Orders and requests of governing authorities.
 9. Services connected, disconnected.
 10. Equipment or system tests and startups.

PART 2 PRODUCTS

2.01 -- NOT APPLICABLE --

PART 3 EXECUTION

3.01 -- NOT APPLICABLE --

END OF SECTION

**SECTION 01 3100
COORDINATION****PART 1 GENERAL****1.01 GENERAL COORDINATION PROVISIONS**

- A. Carefully study and compare Contract Documents before proceeding with fabrication and installation of work. Promptly advise Architect of any error, inconsistency, omission or apparent discrepancy discovered.
- B. Allot time in construction scheduling for liason with Architect; establish procedures for handling queries and clarifications. Use "Request for Information " (RFI) form for requesting information.
- C. If Architect is able to respond to a Request for Information (RFI), by making specific reference to Drawing sheet of Specification section, Contractor shall reimburse Owner for charges of Architect and Architect's Consultants for performing review services for the Contractor.
- D. Coordinate work of various specification sections having interdependent responsibilities for installation, connection and operation.

1.02 SUMMARY

- A. This section includes administrative and supervisory requirements necessary for coordinating construction operations including, but not necessarily limited to, the following:
 - 1. General project coordination procedures.
 - 2. Administrative and supervisory personnel
 - 3. Cleaning and protection.
- B. Related Sections: The following sections contain requirements that relate to this section:
 - 1. Section 01 77 00 - "Closeout Procedures" for coordinating contract closeout.

1.03 COORDINATION DRAWINGS AND LAYOUTS

- A. General:
 - 1. Coordination Drawings are not Shop Drawings and are not to be submitted to Architect for approval.
 - 2. Coordination drawings show relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in space provided or to function as intended.
- B. Coordinate in field with affected trades for proper relationship to work based on project conditions.
- C. Notify Architect of conflicts and other coordination issues requiring resolution prior to commencing construction in each affected area.
- D. Make coordination documents available in field office for review by Architect and Owner during entire period of construction.

1.04 COORDINATION

- A. Coordinate construction operations included in various sections of these specifications to assure efficient and orderly installation of each part of the work.
 - 1. Schedule construction operations in the sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.
 - 3. Make provisions to accommodate items scheduled for later installation.
- B. The Contractor shall review the entire construction document set for dimensional coordination. Special attention should be placed on architectural/structural dimension coordination.
 - 1. If discrepancies occur, the Contractor is directed to place a written request to the Project Architect for clarification. This request must occur prior to any work occurring.
 - 2. Proceeding into an area of work without checking the documents for dimensional coordination and resolving the condition in a timely manner will in no way release the

Contractor from correction procedures.

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project closeout activities.
 - 6.

PART 2 PRODUCTS

2.01 -- NOT APPLICABLE --

2.02

PART 3 EXECUTION

3.01 GENERAL COORDINATION PROVISIONS

- A. Inspection of Conditions: Require the installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Coordinate temporary enclosures with required inspections and tests to minimize the necessity of uncovering completed construction for that purpose.

3.02 CLEANING AND PROTECTION

- A. Clean and protect construction in progress and adjoining materials in place, during handling and installation. Apply protective covering where required to assure protection from damage or deterioration at Substantial Completion.
- B. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to assure operability without damaging effect.
- C. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:
 - 1. Excessively high or low temperatures.
 - 2. Excessively high or low humidity.
 - 3. Air contamination or pollution.
 - 4. Water or ice.
 - 5. Solvents.
 - 6. Chemicals.
 - 7. Light.
 - 8. Radiation.
 - 9. Puncture.
 - 10. Heavy traffic.
 - 11. Soiling, staining and corrosion.
 - 12. Combustion.
 - 13. Electrical current.
 - 14. Improper lubrication.
 - 15. Unusual wear or other misuse.
 - 16. Contact between incompatible materials.
 - 17. Misalignment.
 - 18. Excessive weathering.
 - 19. Unprotected storage.
 - 20. Improper shipping or handling.

- 21. Theft.
- 22. Vandalism.

END OF SECTION 01 31 00

NOT FOR BID

SECTION 01 4200 REFERENCE STANDARDS AND DEFINITIONS

PART 1 GENERAL

1.01 REFERENCES

- A. The Contract Documents contain references to various standard specifications, codes, practices and requirements for materials, work quality, installation, inspections and tests, which references are published and issued by the organizations listed hereinafter by abbreviation and name. Such references are hereby made a part of these Contract Documents to the extent indicated or required.

1.02 DEFINITIONS

- A. General: Basic contract definitions are included in the General and Special Conditions of the Contract.
- B. "Indicated": The term "indicated" refers to graphic representations, notes or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown", "noted", "schedule" and "specified" are used to help the user locate the reference. Location is not limited.
- C. "Directed": Terms such as "directed", "requested", "authorized", "selected", "approved", "required" and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.
- D. "Approved": The term "approved", when used in conjunction with the Architect's action on the Contractor's submittals, applications and requests, is limited to the Architect's duties and responsibilities as stated in the General and Special Conditions of the Contract.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to the project site, ready for unloading, unpacking, assembly, installation and similar operations.
- G. "Install": The term "install" describes operations at the project site including the actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor or contractor of lower tier, who performs a particular construction activity including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.
1. The term "experienced", when used with the term "installer", means having successfully completed previous projects similar in size and scope to this project, being familiar with the specified requirements indicated; and having complied with requirements of authorities having jurisdiction.
 2. Trades: Using terms such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter". It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
 3. Assigning Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.
 - a. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

- J. "Project Site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing work as part of the Project. The extent of the project site is shown on the drawings and may or may not be identical with the description of the land on which the Project is to be built.
- K. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 2004 "Masterformat" numbering system.
- B. Specification Content: These Specifications use certain conventions for the style of language and the intended meaning of certain terms, words and phrases when used in particular situations. These conventions are as follows:
 - 1. Abbreviated Language: Language used in Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate words implied, but not stated, shall be interpolated as the sense requires. Singular words shall be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
 - 2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.
 - a. The words "shall", "shall be" or "shall comply with", depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.04 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such Standards are made a part of the Contract Documents by reference.
- B. When the effective date of a Reference Standard is not given, it shall be understood that the current edition or latest revision thereof and any amendments or supplements thereto in effect on the date of issue of the Contract Documents, as indicated by the date on the cover sheet or in the Invitation to Bid, shall govern the work.
- C. Conflicting Requirements: Where compliance with 2 or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different but apparently equal to the Architect for a decision before proceeding.
 - 1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on the Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
 - 1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available on request.
- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following list of general reference standards is common to the construction industry. This list is not all-inclusive nor does the presence of a reference

standard imply necessarily that it is referenced in the Specifications or other Contract Documents.

- F.
- G. AAAluminum Association
- H. AABCAssociated Air Balance Council
- I. AAMAAmerican Architectural Manufacturers Association
- J. AASHTOAmerican Association of State Highway and Transportation Officials
- K. ACIAmerican Concrete Institute International
- L. ADCAmerican Diffusion Council
- M. AGAAmerican Gas Association
- N. AIAAmerican Institute of Architects
- O. AISCAmerican Institute of Steel Construction
- P. AISIAmerican Iron and Steel Institute
- Q. ALSCAmerican Lumber Standards Committee
- R. AMCAAir Movement and Control Association International
- S. ANSIAmerican National Standards Institute
- T. APAEngineered Wood Association (Formerly American Plywood Ass'n)
- U. ARIAir Conditioning and Refrigeration Institute
- V. ASCEAmerican Society of Civil Engineers
- W. ASHRAEAmerican Society of Heating, Refrigerating and Air Conditioning Engrs
- X. ASMEThe American Society of Mechanical Engineers
- Y. ASPEAmerican Society of Plumbing Engineers
- Z. ASSEThe American Society of Sanitary Engineers
- AA. ASTMAmerican Society for Testing and Materials
- BB. AWIArchitectural Woodwork Institute
- CC. AWSAmerican Welding Society
- DD. BHMABuilders Hardware Manufacturers Association
- EE. BIABrick Industry Association
- FF. CISCACeilings & Interior Systems Construction Association
- GG. CISPICast Iron Soil Pipe Institute
- HH. CLFMChain Link Fence Manufacturers Institute
- II. CRSIConcrete Reinforcing Steel Institute
- JJ. DHIDoor and Hardware Institute (Formerly Ntl. Builders Hardware Assoc)
- KK. EIMAEIFS Industry Manufacturers Association
- LL. FGMAFlat Glass Marketing Association
- MM. FMFactory Mutual Research Corporation
- NN. GAGypsum Association
- OO. GANAGlass Association of North America
- PP. IAPMOInternational Association of Plumbing and Mechanical Officials
- QQ. ICBOInternational Conference of Building Officials
- RR. ICCInternational Code Council
- SS. IEEEInstitute of Electrical and Electronics Engineers

- TT. IESNA Illuminating Engineering Society of North America
 UU. IGCC Insulating Glass Certification Council
 VV. MBMA Metal Building Manufacturers Association
 WW. NAAMM The National Association of Architectural Metal Manufacturers
 XX. NCMA National Concrete Masonry Association
 YY. NEBB National Environmental Balancing Bureau
 ZZ. NECA National Electrical Contractors Association
 AAA. NEMA National Electrical Manufacturers Association
 BBB. NETA National Electrical Contractors Association
 CCC. NFPA National Fire Protection Association
 DDD. NRCAN National Roofing Contractors Association
 EEE. NSFNSF International (National Sanitation Foundation)
 FFF. PCA Portland Cement Association
 GGG. PDI Plumbing and Drainage Institute
 HHH. SDI Steel Door Institute
 III. SGCC Safety Glazing Certification Council
 JJJ. SJI Steel Joist Institute
 KKK. SMACNA Sheet Metal and Air Conditioning Contractors' National Association
 LLL. TCA Tile Council of America
 MMM. UBC Uniform Building Code (International Conference of Building Officials)
 NNN. UL Underwriters Laboratories, Inc.
 OOO. WCLIB West Coast Lumber Inspection Bureau
 PPP. WDMA Window and Door Manufacturers Association (Formerly NWWDA)
 QQQ. WI Woodwork Institute
 RRR. Federal Government Agencies and Acronyms: Names and titles of Federal Government standards - or specification-producing agencies are often abbreviated. The following abbreviations and acronyms which may be referenced in the Contract Documents indicate names of standards - or specification-producing agencies of the Federal Government. This list is not all-inclusive nor does presence on the list imply necessarily that the abbreviation is referenced in the Specifications or other Contract Documents.
- SSS.
 TTT. ADA Americans with Disabilities Act
 UUU. CFR Code of Federal Regulations
 VVV. COE Corps of Engineers, U S Army
 WWW. CPSC Consumer Product Safety Commission
 XXX. DOC Department of Commerce
 YYY. DOT Department of Transportation
 ZZZ. EPA Environmental Protection Agency
 AAAA. FAA Federal Aviation Administration
 BBBB. FCC Federal Communications Commission
 CCCC. FDA Food and Drug Administration
 DDDD. FHA Federal Housing Administration
 EEEE. FS Federal Specifications and Standards (General Services Admin)

FFFF. GSAGeneral Services Administration
GGGG. MILMilitary Specifications and Standards (U S Dept of Defense)
HHHH. NISTNational Institute of Standards and Technology
IIII. OSHAOccupational Safety and Health Administration (U S Dept ofLabor)
JJJJ. PSPProduct Standards (U S Dept of Commerce)
KKKK. USDAUnited States Department of Agriculture
LLLL. USPSUnited States Postal Service
MMMM.

PART 2 PRODUCTS

2.01 -- NOT APPLICABLE --

2.02

PART 3 EXECUTION

3.01 -- NOT APPLICABLE --

END OF SECTION 01 42 00

NOT FOR BID

SECTION 01 4500 QUALITY CONTROL

PART 1 GENERAL

1.01 SUMMARY

- A. This section includes administrative and procedural requirements for quality-control services.
- B. Quality-Control services include inspections, tests and related actions, including reports performed and/or directed by the Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated in the Construction Documents. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.

1.02 RESPONSIBILITIES

- A. Owner will employ and pay for services of an Independent Testing Laboratory to perform specified inspections and testing.
- B. Contractor Responsibilities:
 - 1. Deliver to laboratory at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix design.
 - 2. Cooperate with laboratory personnel, and provide access to the work, and to manufacturer's facilities.
 - 3. Provide incidental labor and facilities to provide access to work to be tested, to obtain and handle samples at the site or at source of products to be tested, to facilitate tests and inspections, storage and curing of test sample.
 - 4. Notify Architect/Engineer and laboratory 24 hours prior to expected time for operations requiring inspection and testing services.
 - a. Unless otherwise indicated as the responsibility of another identified entity, Contractor shall provide inspections, tests and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction. Costs for these services are included in the Contract Sum.
 - 1) Where individual sections specifically indicate that certain inspections, tests, and other quality control services are the Contractor's responsibility, the Contractor shall employ and pay a qualified independent testing agency to perform quality-control services. Costs for these services are included in the Contract Sum.
- C. Retesting: The Contractor is responsible for retesting where results of inspections, tests or other quality-control services prove unsatisfactory and indicate noncompliance with Contract Document requirements.
 - 1. The cost of retesting construction, revised or replaced by the Contractor or Trade Subcontractor, is the Trade Subcontractor's responsibility where required tests performed on original construction indicated noncompliance with Contract Document requirements.
 - 2. Associated Services: Cooperate with agencies performing required inspections, tests and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel. Auxiliary services required include, but are not limited to, the following:
 - a. Provide security and protection of samples and test equipment at the project site.
- D. Duties of the Testing Agency: The Independent Agency engaged to perform inspections, sampling and testing of materials and construction specified in individual sections shall cooperate with the Architect and the Contractor in performance of the agency's duties. The testing agency shall provide qualified personnel to perform required inspections and tests.
 - 1. The agency shall notify the Architect and the Contractor promptly of irregularities or deficiencies observed in the work during performance of its services.
 - 2. The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents or approve or accept any portion of the work.

- E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
 - 1. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.
- F. Owner reserves the right to employ an Independent Testing agency at any time.

1.03 SUBMITTALS

- A. The Independent Testing Agency shall submit a certified written report, in duplicate, of each inspection, test or similar service to the Architect and Structural Engineer. If the Contractor is responsible for the service, submit a certified written report, in duplicate, of each inspection, test, or similar service through the Contractor.
 - 1. Submit additional copies of each written report directly to the governing authority, when the authority so directs.
 - 2. Report Data: Written reports of each inspection, test or similar service include, but are not limited to, the following:
 - a. Date of issue.
 - b. Project title and number.
 - c. Name, address and telephone number of testing agency.
 - d. Dates and locations of samples and tests or inspection.
 - e. Names of individuals making the inspection or test.
 - f. Designation of the work and test method.
 - g. Identification of product and Specification Section.
 - h. Complete inspection or test data.
 - i. Test results and an interpretation of test results.
 - j. Ambient conditions at the time of sample taking and testing.
 - k. Comments or professional opinion on whether inspected or tested work complies with Contract Document requirements.
 - l. Name and signature of laboratory inspector.
 - m. Recommendations on retesting.

1.04 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as Reference Standards, comply with requirements of the Standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to Reference Standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of Standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Neither the contractual relationships, duties or responsibilities of the parties in contract nor those of Architect shall be altered from the Contract Documents by mention or inference in any reference document.

1.05 QUALITY ASSURANCE

- A. Qualifications of Service Agencies: Engage inspection and testing service agencies, including independent testing laboratories, that are prequalified as complying with the American Council of Independent Laboratories' "Recommended Requirements for Independent Laboratory Qualification" and that specialize in the types of inspections and tests to be performed.
 - 1. Each Independent Inspection and Testing Agency engaged on the project shall be authorized by authorities having jurisdiction to operate in the state where the project is

located.

2.

PART 2 PRODUCTS

2.01 -- NOT APPLICABLE --

2.02

PART 3 EXECUTION

3.01 REPAIR AND PROTECTION

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Section 01 7000 - "Execution Requirements".
- B.
- C. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- D. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing or similar services.
- E. Should manufacturer's instructions conflict with Contract Documents, request clarification from Architect before proceeding.
- F. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- G. Have work performed by persons qualified to produce required and specified quality.
- H. Verify that field measurements are as indicated on Shop Drawings or and instructed by the manufacturer.
- I. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion and disfigurement.

3.02 MANUFACTURER'S FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

END OF SECTION 01 45 00