

DIVISION 01

GENERAL REQUIREMENTS

Section 01 1100

SUMMARY OF THE WORK

PART 1 - GENERAL

1.01 WORK COVERED BY THE CONTRACT DOCUMENTS

- A. These specifications shall cover entirely all of the labor and material requirements for the project. The General Conditions of the Contract, Supplementary Conditions, Instructions to Contractor, and any Addenda issued by the architect are hereby made a part of each division or section of these specifications as if bound, repeated, or included therein.
- B. In the interest of clarity and brevity, phrases such as "The contractor shall ..." or "The contractor shall furnish and install ..." have been omitted from these specifications.
- C. The General Construction Contract shall include all construction work required to complete the total project in accordance with requirements of the contract documents and shall include all heating, air conditioning, ventilating, electrical, and mechanical.
- D. Contractor's Duties:
 1. Except as specifically noted, provide and pay for:
 - a. Labor, materials, and equipment
 - b. Tools, construction equipment, and machinery
 - c. Water, heat, and utilities required for construction
 - d. Transportation and other facilities and services necessary for proper execution and completion of work
 2. Pay all legally required sales, consumer, and use taxes.
 3. Secure and pay for, as necessary for proper execution and completion of work, and as applicable at time of receipt of bids:
 - a. Permits
 - b. Government fees
 - c. Licenses
 4. Give required notices.
 5. Comply with laws, codes, ordinances, rules, regulations, orders, and other legal requirements of public authorities which bear on the performance of work.
 6. Promptly submit written notice to the architect and engineer of observed variance of contract documents from legal requirements. It is not contractor's responsibility to make certain that drawings and specifications shall comply with codes and regulations.
 - a. Appropriate modifications to contract documents will adjust necessary changes.
 - b. Assume responsibility for work known to be contrary to such requirements without notice.
 7. Enforce strict discipline and good order among the employees. Do not employ on work:
 - a. Unfit persons
 - b. Persons not skilled in assigned work tasks

1.02 CONTRACTOR USE OF PREMISES

- A. Confine operations at site to areas permitted by law, ordinances, permits, and contract documents.
- B. Do not unreasonably encumber project with materials or equipment.
- C. Assume full responsibility for protection and safekeeping of products stored on premises.
- D. Move any stored products which interfere with operation of owner or other contractor.
- E. Materials may be stored in approved off-site areas when properly insured in the owner's interest.

- F. Owner will use existing portions of the building during the construction process. The contractor is to maintain required "means of egress" for safe access to the existing building. Contractor is responsible for keeping the site clean and providing a safe environment for building users. See Section 01 5000, Temporary Facilities and Controls, for additional requirements.

1.03 NO SMOKING POLICY

- A. The Owner has a No Smoking Policy for the building.
- B. It is the policy that all uses of tobacco and tobacco products will be prohibited inside the building. At no time will the use of tobacco products be permitted.
- C. This policy applies to all Staff, Visitors, General Contractors, Subcontractors, and Vendors. This policy is strictly enforced without exception.

1.04 WORK SEQUENCE

- A. The existing building will be partially occupied during the renovation work.
1. The contractor is to schedule construction work to keep existing building spaces open and functional for the owner's use.
 2. Any work that would be a hazard for building occupants is to be scheduled when the building is closed.
 3. Any work that requires the interruption of the utility service to any portion of the existing building is to be coordinated and scheduled with the owner prior to beginning work.
 4. All work scheduling is to be coordinated with the owner to permit continual use of the egress locations as required by state fire marshal.
 5. The contractor is to perform all construction and contract work within the limits of the site at the contractor's schedule.
 6. All work shall be performed at the contractor's schedule and within contract time.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

**SECTION 01 2100
ALLOWANCES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Cash allowances.

1.02 RELATED REQUIREMENTS

- A. Section 01 2976 - Progress Payment Procedures: Additional payment and modification procedures.

1.03 CASH ALLOWANCES

- A. Costs Included in Cash Allowances: Cost of product to contractor or subcontractor, including applicable trade discounts, cost of delivery to site, applicable taxes.
- B. Brackett Krennerich Architects Responsibilities:
 - 1. Consult with contractor for consideration and selection of products, suppliers , and installers.
 - 2. Select products in consultation with owner and transmit decision to contractor.
 - 3. Prepare Change Order.
- C. Contractor's Responsibilities:
 - 1. Assist Brackett Krennerich Architects in selection of products, suppliers , and installers.
 - 2. On notification of which products have been selected, execute purchase agreement with designated supplier and installer.
 - 3. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
 - 4. Promptly inspect products upon delivery for completeness, damage, and defects. Submit claims for transportation damage.
- D. Differences in costs will be adjusted by Change Order.

1.04 ALLOWANCES SCHEDULE

- A. Section 04 - 2000: Include the stipulated sum of \$425.00 per thousand for purchase and delivery of face brick.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2200
UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. List of unit prices, for use in preparing Bids.
- B. Measurement and payment criteria applicable to Work performed under a unit price payment method.
- C. Defect assessment and non-payment for rejected work.

1.02 COSTS INCLUDED

- A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.03 UNIT QUANTITIES SPECIFIED

- A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

1.04 MEASUREMENT OF QUANTITIES

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities will be verified by the independent testing agency retained by the construction manager to provide soil testing services.
- C. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.
- D. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- E. Stipulated Sum/Price Measurement: Items measured by volume as a completed item or unit of the Work.
- F. Perform surveys required to determine quantities, including control surveys to establish measurement reference lines. Notify Brackett Krennerich Architects prior to starting work.
- G. Engineer's Responsibilities: Sign surveyor's field notes or keep duplicate field notes, calculate and certify quantities for payment purposes.

1.05 PAYMENT

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work which is incorporated in or made necessary by the Work and accepted by the Brackett Krennerich Architects, multiplied by the unit sum/price.
- B. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected Products.

1.06 DEFECT ASSESSMENT

- A. Replace Work, or portions of the Work, not conforming to specified requirements.

- B. The authority of Brackett Krennerich Architects to assess the defect and identify payment adjustment is final.

1.07 SCHEDULE OF UNIT PRICES

- A. Item: Cementous Roof Deck; Section 03 5113.
1. Square foot price to include all labor, equipment, and material to remove existing, disposal, and replacement with suitable roof deck.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2973
SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 GENERAL

- A. Submit to the architect/engineer schedule of values, at least ten (10) days of the award to contract.
- B. Upon request by architect/engineer, support values given with data that will substantiate their correctness.
- C. Submit quantities of designated materials.
- D. Payment for materials stored on site will be limited to those materials listed in Schedule of Unit Material Values.
- E. Use Schedule of Values only as basis for contractor's Application for Payment.

1.02 FORM OF SUBMITTAL

- A. Submit typewritten Schedule of Values on 8-1/2" x 11" white paper.
- B. Use Table of Contents of this specification as basis for format for listing costs of work for each of the sections from all divisions.
- C. Identify each line item with number and title as listed in Table of Contents of this specification (sections).

1.03 PREPARING SCHEDULE OF VALUES

- A. Itemize separate line item cost for each of the following general cost items:
 - 1. Performance and Payment Bonds
 - 2. Field Supervision and Layout
 - 3. Temporary Facilities and Controls
- B. Itemize separate line item cost for work required by each section of this specification.
- C. Breakdown installed cost into:
 - 1. Delivered cost of product, with taxes paid
 - 2. Installation cost
- D. For each line item which has installed value of more than 1%, break down costs to list major products or operations under each item.
- E. Round off figures to nearest dollar.
- F. Make sum of total costs of all items listed in schedule equal to total contract sum.

1.04 REVIEW AND RESUBMITTAL

- A. After review by architect/engineer, revise and resubmit Schedule (and Schedule of Material Values) as required.
- B. Resubmit revised Schedule in same manner.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

**SECTION 01 2976
PROGRESS PAYMENT PROCEDURES**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Application for payments
- B. Defect Assessment

1.02 RELATED SECTIONS

- A. Section 00 7300, Supplementary Conditions
- B. Section 01 2973, Schedule of Values
- C. Section 00 6000, Project forms

1.03 APPLICATIONS FOR PAYMENT

- A. Submit three (3) original of each application on Architect-accepted form to the Architect (all copies require original signatures in blue ink).
- B. Content and Format: Utilize Schedule of Values for listing items in Periodic Pay Estimate.
- C. Submit an updated construction schedule with each Periodic Pay Estimate.
- D. Payment Period: Progress payments to be made monthly.
- E. Substantiating Data: When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question.

1.04 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Architect/Engineer and Owner it is not practical to remove and replace the Work, the Architect/Engineer will direct an appropriate remedy or adjust payment.
- C. The defective Work may remain, but the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner/Architect.
- D. The defective Work will be partially repaired to the instructions of the Architect/Engineer, and the unit sum/price will be adjusted to a new sum/price at the discretion of the Owner.
- E. The authority of the Owner to assess the defect and identify payment adjustment is final.
- F. Non-Payment For Rejected Products: Payment will not be made for rejected products for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling, and disposing of rejected products.

PART II-PRODUCTS

2.01 NOT USED.

PART III-EXECUTION

3.01 NOT USED.

END OF SECTION

**SECTION 01 3113
COORDINATION**

PART 1 - GENERAL

1.01 EXAMINATION

- A. Each contractor, subcontractor, or supplier shall thoroughly examine the drawings and specifications pertaining to separate contracts and include in his base bid those items for which he will be responsible and for the proper coordination of the work to be performed.

1.02 TRANSITIONS

- A. The architect accepts no responsibility for the naming of every item that may be needed to make transitions from the work of one contractor to another. All such transitions shall be the entire responsibility of the contractor, subcontractor, and materials and equipment suppliers involved.

1.03 SCHEDULES

- A. General Contractor shall coordinate the scheduling of all work.

1.04 LOCATION OF WORK

- A. The contractor shall check and verify all measurements and dimensions shown on contract drawings and shop drawings of all the work as it progresses.
- B. The proper location of work of all subcontractors, including supports for equipment, shall be the final conclusive responsibility of the general contractor regardless of who is responsible for the layout of the work in the first instance.

1.05 UNLOADING AND HOISTING MATERIALS

- A. The contractor, each subcontractor, and each supplier of materials and equipment shall be responsible for the hoisting of their materials and equipment to the proper location for installation in the project.
- B. They shall also be responsible for unloading of all materials and equipment at the job site.

1.06 STORAGE OF MATERIALS

- A. General contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and equipment and coordinate the storage and execution of their work with his.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01 3119
PROJECT MEETINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. See Section 00 2100, Instructions to Bidders for Pre-Bid Conference.
- B. Preconstruction Meeting
- C. Progress Meetings
- D. Pre-installation Meetings

1.02 PRECONSTRUCTION MEETING

- A. Architect will schedule a meeting after Notice of Award.
- B. Attendance Required: Owner, Architect, Contractor, Contractor's Superintendent, and major subcontractors.
- C. Agenda:
 - 1. Designation of personnel representing the parties in Contract and the Architect.
 - 2. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 3. Scheduling.
 - 4. Use of premises by Owner and Contractor.
 - 5. Owner's requirements.
 - 6. Construction facilities and controls provided by Owner.
 - 7. Temporary utilities.
 - 8. Security and housekeeping procedures.
 - 9. Procedures for testing.
 - 10. Maintaining record documents.
 - 11. Inspection and acceptance of equipment put into service during construction.
- D. General Contractor is to record minutes and distribute copies within two days after meeting to participants, with two copies to Architect/Engineer, and those affected by decisions made.

1.03 PROGRESS MEETINGS

- A. The General Contractor is to schedule and administer meetings throughout progress of the Work.
 - 1. Progress meetings to be held bi-monthly until the project is eighty percent complete.
 - 2. After projection completion reaches eighty percent, progress meetings are to be held every week.
- B. Make arrangements for meetings, prepare agenda with copies for participants, and preside at meetings.
- C. Attendance Required: Job superintendent, major subcontractors and suppliers, Owner, Architect/Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
 - 1. Review minutes of previous meetings.
 - 2. Review of Work progress.
 - 3. Field observations, problems, and decisions.
 - 4. Identification of problems which impede planned progress.
 - 5. Review of submittals schedule and status of submittals.
 - 6. Review of off-site fabrication and delivery schedules.
 - 7. Maintenance of progress schedule.
 - 8. Corrective measures to regain projected schedules.
 - 9. Planned progress during succeeding work period.
 - 10. Coordination of projected progress.

11. Maintenance of quality and work standards.
 12. Effect of proposed changes on progress schedule and coordination.
 13. Other business relating to Work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, and those affected by decisions made.

1.04 PRE-INSTALLATION MEETING

- A. When required in individual specification sections, the General Contractor is to convene a pre-installation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four (4) days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 1. Review conditions of installation, preparation and installation procedures.
 2. Review coordination with related work.
- E. Record minutes and distribute copies within two (2) days after meeting to participants, with two copies to architect, owner, participants, and those affected by decisions made.

PART 2-PRODUCTS

2.01 NOT USED.

PART 3-EXECUTION

3.01 NOT USED.

END OF SECTION

SECTION 01 3216
CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 SCHEDULE

- A. Prepare and submit for architect's approval a projected construction schedule for the entire work.
- B. The schedule shall indicate the dates for the starting and completion of various stages and sequence of construction and shall be revised monthly. Submit with contractor's Application for Payment each month.

1.02 FORM

- A. Prepare schedule in the form of a horizontal bar chart providing:
 - 1. Separate horizontal bar column for each major specification section.
 - 2. Place in chronological order of beginning of each item of work.
 - 3. Identify each horizontal bar:
 - a. By major specification section
 - b. By distinct graphic delineation
 - 4. Horizontal time scale (weeks)
 - 5. Allow space for denoting of actual progress of the work.
 - 6. Minimum sheet size: 8-1/2" x 14"

1.03 SCHEDULE UPDATE

- A. Update schedules accurately indicating the progress to first day of each month and submit monthly with Application and Certificate for Payment. Updated schedules are to be distributed at monthly progress meetings to all attendees.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

NOT USED.

END OF SECTION

SECTION 01 3323
SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Project Data
- B. Shop Drawings
- C. Samples
- D. Design Data
- E. Test Reports
- F. Certificates
- G. Manufacturer's Instructions
- H. Manufacturer's Field Reports
 - 1. Erection Drawings

1.02 RELATED SECTIONS

- A. Section 00 6000, Project Forms

1.03 PROJECT DATA

- A. Manufacturer's standard schematic drawings:
 - 1. Modify drawings to delete information which is not applicable to project
 - 2. Supplement standard information to provide additional information applicable to project
- B. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations, and other standard descriptive data
 - 1. Clearly mark each copy to identify pertinent materials, products, or models
 - 2. Show dimensions and clearances required
 - 3. Show performance characteristics and capacities
 - 4. Show wiring diagrams and controls

1.04 SHOP DRAWINGS

- A. Original drawings, prepared by contractor, subcontractor, supplier, or distributor, which illustrate some portion of the work; showing fabrication, layout, setting, or erection drawings.
 - 1. Prepared by a qualified detailer
 - 2. Identify details by reference to sheet and detail numbers shown on contract document drawings
 - 3. Minimum sheet size: 8-1/2" x 11"
 - 4. Refer to 3.02 Submission Requirements.

1.05 SAMPLES

- A. Physical examples to illustrate materials, equipment, or workmanship, and to establish standards by which completed work is judged.
 - 1. Office Samples: of sufficient size and quantity to clearly illustrate:
 - a. Functional characteristics of product or material with integrally related parts and attachment devices
 - b. Finishes

1.06 DESIGN DATA

- A. Submit for the Architect/Engineer's knowledge as contract administrator or for the owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

1.07 TEST REPORTS

- A. Submit for the Architect/Engineer's knowledge as contract administrator or for the owner.

- B. Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.

1.08 CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or the Contractor to Architect/Engineer, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect/Engineer.

1.09 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing to Architect/Engineer for delivery to Owner in quantities specified for Product Data.
- B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.10 MANUFACTURER'S FIELD REPORTS

- A. Submit reports for the architect/engineer's benefit as contract administrator or for the owner.
- B. Submit report in duplicate within 30 days of observation to architect/engineer for information.
- C. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.11 ERECTION DRAWINGS.

- A. Submit drawings for the Architect/Engineer's benefit as contract administrator or for the Owner.
- B. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
- C. Data indicating inappropriate or unacceptable Work may be subject to action by the Architect/Engineer or Owner.

PART 2-PRODUCTS

2.01 NOT USED.

PART 3-EXECUTION

3.01 CONTRACTOR RESPONSIBILITIES

- A. Review shop drawings, project data, and samples prior to submission.
- B. Verify:
 - 1. Field measurements of existing building/structure
 - 2. Field construction criteria
 - 3. Catalog numbers and similar data
- C. Coordinate each submittal with requirements of work and of contract documents.
- D. Contractor's responsibility for errors and omissions in submittals is not relieved by architect/engineer's review of submittals.
- E. Contractor's responsibility for deviations in submittals from requirements of contract documents is not relieved by architect/engineer's review of submittals, unless architect/engineer gives written acceptance and deviations are clearly marked on submittals.
- F. Notify architect/engineer in writing at time of submission of deviations in submittals from requirements of contract documents.
- G. Begin no work which requires submittals until return of submittals with architect/engineer's stamp and initials or signature indicating review.

3.02 SUBMISSION REQUIREMENTS

- A. Schedule submissions at least 14 days before dates reviewed submittals will be needed.
- B. Submittals shall be sent electronically to the Architect. This document will be stored electronically at the project site for Architect and Contractor access during construction. All documents shall be sent in PDF format and saved in the following method SD_03_3000_01.PDF. Each Shop Drawing shall have specification number and the submittal number for that specification section. The file above indicates specification section 03 3000 submittal number one. Upon completion of the project the contractor is to submit four copies on CD of all Shop Drawings during the project closeout phase. These shall be in PDF format.
- C. Submit number of samples specified in each of specifications sections.
- D. Accompany submittals with transmittal letter, in duplicate, containing:
 - 1. Date
 - 2. Project title and number
 - 3. Contractor's name and address
 - 4. The number of each shop drawing, project data, and sample submitted
 - 5. Notification of deviations from contract documents
 - 6. Other pertinent data
- E. Submittals shall include:
 - 1. Date and revision dates
 - 2. Project title and number
 - 3. The names of:
 - a. Architect/Engineer
 - b. Contractor
 - c. Subcontractor
 - d. Supplier
 - e. Manufacturer
 - f. Separate detailer when pertinent
 - 4. Identification of product or material
 - 5. Relation to adjacent structure or materials
 - 6. Field dimensions, clearly identified as such
 - 7. Specification selection number
 - 8. Applicable standards, such as ASTM number or Federal specification
 - 9. Identification of deviations from contract documents
 - 10. Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements, and compliance with contract documents

3.03 RESUBMISSION REQUIREMENTS

- A. Shop Drawings:
 - 1. Revise initial drawings as required and resubmit as specified for initial submittal
 - 2. Indicate on drawings any changes which have been made other than those requested by architect/engineer
- B. Project Data and Samples: Submit new data and samples as required for initial submission.

3.04 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

- A. Distribute copies of shop drawings and project data which carry architect/engineer's stamp, or initialed approval, to:
 - 1. Contractor's file
 - 2. Job site file
 - 3. Record documents file
 - 4. Other prime contractors
 - 5. Subcontractors
 - 6. Supplier
 - 7. Fabricator

- B. Distribute samples as directed.

3.05 ARCHITECT/ENGINEER'S DUTIES

- A. Review submittals with reasonable promptness.
- B. Review for:
 - 1. Design concept of project
 - 2. Information given in contract documents
- C. Review of separate item does not constitute review of an assembly in which item functions.
- D. Affix stamp, initials, or signature certifying to review of submittal.
- E. Return submittals to contractor for distribution.

END OF SECTION

SECTION 01 4000 QUALITY REQUIREMENTS

PART 1-GENERAL

1.01 SECTION INCLUDES

- A. Quality control and control of installation.
- B. Tolerances
- C. References.
- D. Testing and inspection services.
- E. Examination.
- F. Preparation.

1.02 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. 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.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on Shop Drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.04 REFERENCES

- A. ASTM E 329 - Standard Specification for Agencies Engaged in the Testing and/or Inspection of Materials used in Construction.
- B. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation.
- C. ASTM D 3740 - Standard Practice for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.

1.05 PRODUCT STANDARDS

- A. For products or workmanship specified by association, trade, or other consensus 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 by date of issue current on date for receiving bids, except where a specific date is established by code.
- C. Obtain copies of standards where required by product specification sections.
- D. Should specified reference standards conflict with Contract Documents, request clarification from the Architect/Engineer before proceeding.
- E. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Architect/Engineer shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.06 TESTING AND INSPECTION AGENCIES

- A. As indicated in individual specification sections, Contractor shall employ and pay for services of an independent testing agency to perform specified testing.
 - 1. Prior to start of work, submit testing laboratory name, address, and telephone number, and names of full time registered engineer and responsible officer.
 - 2. Submit copy of report of laboratory facilities inspection made by Materials Reference Laboratory of National Bureau of Standards during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- B. Testing agency selected must be approved by the owner/architect.
- C. Inspection Agency: Comply with requirements of ASTM D3740, ASTM E329, and ASTM C 1077.
- D. Laboratory: Authorized to operate in the State of Arkansas.
- E. Laboratory Staff: Maintain a full time registered engineer on staff to review services.
- F. Testing Equipment: Calibrated at reasonable intervals either by NIST or using an NIST established Measurement Assurance Program, under a laboratory measurement quality assurance program.
- G. Concrete Field Tests
 - 1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician Grade 1, according to ACI CP-1 or an equivalent certification program.

PART II-PRODUCTS

2.01 NOT USED.

PART III-EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.

- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. 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.
- E. Perform Work by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on Shop Drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

3.04 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

3.05 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 instruction when necessary.
- B. Submit qualifications of observer to architect/engineer 30 days in advance of required observations.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturer's written instructions.
- D. Refer to Section 01 3323, Shop Drawings. Project Data, and Samples, manufacturer's field reports article.

3.06 TESTING AND INSPECTION

- A. See individual specification sections for testing and inspection required.
 - 1. See special inspections schedule on the drawings.
- B. Testing Agency Duties:
 - 1. Test samples of mixes submitted by contractor.
 - 2. Provide qualified personnel at site. Cooperate with Architect and contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify Architect and contractor of observed irregularities or non-conformance of Work or products.
 - 6. Perform additional tests and inspections required by Architect.
 - 7. Attend preconstruction meetings and progress meetings.

- C. Agency Reports: After each test promptly submit two copies of report to Architect and contractor. When requested by architect/engineer, provide interpretation of test results. Include the following:
1. Date issued.
 2. Project title and number.
 3. Name of inspector.
 4. Date and time of sampling or inspection.
 5. Identification of product and specifications section.
 6. Location in the project.
 7. Type of inspection or test.
 8. Date of test.
 9. Results of test.
 10. Conformance with Contract Documents.
- D. Limits on Testing/Inspection Agency Authority:
1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency may not assume any duties of the contractor.
 4. Agency has no authority to stop the Work.
 5. Agency has no authority to authorize additional work.
- E. Contractor's Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used which require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work.
 3. Provide incidental labor and facilities:
 - a) To provide access to Work to be tested/inspected.
 - b) To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c) To facilitate tests/inspections.
 - d) To provide storage and curing of test samples.
 4. Notify Architect and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required for contractor's use beyond specified requirements.
 6. Testing and employment of testing agency or laboratory shall not relieve the contractor of obligation to perform work in accordance with requirements of the Contract Documents.
- F. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.
- G. Re-testing required because of non-conformance to specified requirements shall be paid for by the contractor. Payment for re-testing or re-inspection will be charged to the contractor by deducting testing charges from the contract sum/price.

3.07 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not conforming to specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary Utilities:
 - 1. Temporary electricity - Owner.
 - 4. Telephone service - Contractor.
 - 5. Temporary water service - Owner.
 - 6. Temporary sanitary facilities - Contractor.
- B. Construction Facilities:
 - 1. Field offices and sheds
 - 2. Project identification
- C. Temporary Controls:
 - 1. Barriers – Provide Protection of the Public.
 - 2. Enclosures and Fencing
 - 3. Water Control

1.02 TEMPORARY ELECTRICITY

- A. The owner will provide at no cost power service required from utility source as needed for construction operation.
- B. The Contractor shall be responsible for hook-up of all temporary connections to electricity.

1.03 TELEPHONE

- A. Provide, maintain, and pay for telephone service to the project site at time of project mobilization.
- B. Cellular phone at construction site will be permitted.

1.04 TEMPORARY WATER SERVICE

- A. The owner will provide at no cost suitable quality water service as needed to maintain specified conditions for construction operations.
- B. The contractor shall be responsible for hook-up of all temporary connections to water.

1.05 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures.
 - 1. Building rest rooms are not to be used during construction.
- B. Provide at time of project mobilization.

1.06 FIELD OFFICES AND SHEDS

- A. The contractor, at his expense, may erect such temporary structures on the site for offices, materials storage, and tool storage as may be required for his use and that of his subcontractors. Location shall be approved by the architect.
- B. The contractor will be furnished office for location of job telephone, plan rack, plan reference table, and filing cabinet for correspondence, specifications, and shop drawings within the existing building.
- C. At the completion of the project, all such temporary structures shall be removed from the site.

1.07 PROJECT IDENTIFICATION

- A. Project Identification Signs:
 - 1. One painted sign, 64 square feet area, bottom 3 feet above ground.
 - 2. Content:
 - a. Project title, logo and name of Owner as indicated on Contract Documents.

- b. Names and titles of authorities.
 - c. Names and titles of Architect/Engineer.
 - d. Name of Prime Contractor.
 3. Graphic Design, Colors, Style of Lettering: Designated by Architect/Engineer.
- B. Sign Materials:
 1. Structure and Framing: New wood, structurally adequate.
 2. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4-inch thick, standard large sizes to minimize joints.
 3. Paint and Primers: Exterior quality, two coats; sign background of color as selected.
 4. Lettering: Exterior quality paint, contrasting colors as selected.
- C. Installation:
 1. Install project identification signs within 15 days after date fixed by Notice to Proceed.
 2. Erect at location directed by the Architect.
 3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
 4. Install signs surface plumb and level, with butt joints. Anchor securely.
 5. Paint exposed surfaces of signs, supports, and framing.
- D. Maintenance: Maintain signs and supports clean, repair deterioration and damage.
- E. Removal: Remove signs, framing, supports, and foundations at completion of Project and restore the area.

1.08 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barriers to protect the owner's staff and the public.

1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Final Application for Payment inspection.
- B. Clean and repair damage caused by installation of temporary work.
- C. Restore existing facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

PART 2 PRODUCTS

2.01 NOT USED.

PART 3 EXECUTION

3.01 NOT USED.

END OF SECTION

**SECTION 01 5719
ENVIRONMENT PROTECTION**

PART 1 GENERAL

1.01 DEFINITIONS

- A. For the purpose of these specifications, environment protection is defined as the preservation of the environment in its preconstruction state to the greatest feasible extent throughout project construction.

1.02 QUALITY CONTROL

- A. The Contractor shall inspect all environment protection operations for compliance with the contract requirements, perform all test as required, and maintain records of his quality control for all operations, including but not limited to the following: Compliance with all Federal, State and local pollution control regulations.
1. Monitoring and surveillance procedures.
 2. Site access, parking, and traffic control of equipment.
 3. Locations of temporary facilities and support activities.
 3. Handling, storage, use, and disposal of petroleum products, chemicals, and toxic materials.
 4. Solid and liquid waste disposal.
 5. Noise control, dust control, and pest control.
 6. Disposal of construction materials and other debris.
 7. A copy of these records, including all tests performed and corrective actions taken shall be furnished to the architect/owner.

1.03 NOTIFICATION

- A. The Owner/Architect will notify the Contractor in writing of any non-compliance brought to their attention of applicable Federal, State, or local laws or regulations. The Contractor shall, after receipt of such notice, immediately inform the Architect of proposed corrective action and take such action as may be approved. If the Contractor fails or refuses to comply promptly, the Owner/Architect may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop orders shall be made the subject of a claim for extension of time, or for excess costs or damages by the Contractor. The Architect shall be notified of any spillage of hazardous chemicals in excess of 2 gallons.

1.04 SUBCONTRACTORS

- A. Compliance with the provisions of this section by subcontractors will be the responsibility of the Contractor.

1.05 PROTECTION OF LAND RESOURCES

- A. The Contractor shall confine his construction activities to areas on the site as determined and outline at the Preconstruction Meeting.

1.06 PROTECTION OF WATER RESOURCES

A. GENERAL

1. The Contractor shall not pollute storm water with fuels, oil, bitumens, calcium chloride, acids, or other harmful materials. The Contractor shall investigate and comply with all applicable Federal, State, County and municipal laws concerning pollution of rivers and streams.

B. SPILLAGES

1. Special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, waste washings, and concrete drainage from entering storm water system.

C. DISPOSAL

1. Disposal of any materials, wastes, effluents, trash, garbage, oil grease, chemicals, etc., in areas adjacent to streams shall not be permitted. Particular attention under this provision shall be given to lubricants and fuels drained from equipment and supply tanks.

1.07 DISPOSAL OF DEBRIS

- A. All materials resulting from construction operations of such as undercut material, and debris shall be disposed of off-site by the Contractor as per Arkansas Department of Environmental Quality-Solid Waste Division regulatory requirements. The Contractor shall be responsible for compliance with all Federal, State, and local laws and regulations applicable to disposal of these materials. The contractor shall disclose the disposal site in the pre-construction conference. If private property is selected as disposal site, the property owner's written consent shall be furnished to the owner/architect.
- B. Disposal of petroleum, oil, and lubricants (POL) products, chemicals, or other hazardous or toxic components, may require EPA approval or permits from the state. Where such permits are required, the Contractor shall be responsible for obtaining such permits and shall be responsible for the payment of any fines or penalties for failure to do so.

1.08 DUST CONTROL

- A. The Contractor will be required to maintain all excavations, embankments, stockpiles, haul roads, permanent access roads, plant sites, waste areas, borrow areas, and all other work areas within or without the project boundaries free from dust which would exceed allowable limits of the standards for air pollution.

1.09 NOISE CONTROL

- A. The Contractor will be required to comply with Federal, State and local requirements for noise control of his vehicles and equipment.

PART 2 PRODUCTS

2.01 NOT USED.

PART 3 EXECUTION

3.01 NOT USED.

END OF SECTION

**SECTION 01 6000
PRODUCT REQUIREMENTS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.

1.02 RELATED SECTIONS

- A. Section 00 2100, Instructions to Bidders

1.03 PRODUCTS

- A. Provide products of qualified manufacturers suitable for intended use. Provide products of each type by a single manufacturer unless specified otherwise.

1.04 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.05 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Provide bonded off-site storage and protection of stored materials. Products stored off-site must be inventoried by Architect before payment can be made. Insurance certificates must name the owner as certificate holder/beneficiary.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.06 PRODUCT OPTIONS

- A. Products Specified by Reference Standards: Select any product meeting standards, by any manufacturer.
- B. Products Specified by Naming Several Products or Manufacturers: Select any product and manufacturer named.

- C. Products Specified by Naming Only One Product and Manufacturer: There is no option unless substitution is approved as specified. Products of other manufacturers shall meet minimum performance criteria specified or quality of product description.

1.07 PRODUCT SUBSTITUTION PROCEDURES

- A. Architect/Engineer will consider requests for Substitutions only within 15 days after date of Owner-Contractor Agreement.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the Substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit Shop Drawings, Product Data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 3. The Architect will notify Contractor in writing of decision to accept or reject request.

PART 2 PRODUCTS

2.01 NOT USED.

PART 3 EXECUTION

3.01 NOT USED.

END OF SECTION

**SECTION 01 7300
EXECUTION REQUIREMENTS**

PART 1-GENERAL

1.01 SECTION INCLUDES

- A. Closeout procedures.
- B. Starting of systems
- C. Demonstration and Instructions
- D. Testing, Adjusting and Balancing
- E. Protecting installed construction.

1.02 RELATED SECTIONS

- A. Section 01 7329, Cutting and Patching
- B. Section 01 7400, Cleaning
- C. Section 01 7800, Close-out Submittals
- D. Section 01 7839, Project Record Documents

1.03 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect's review.
- B. Provide submittals to Architect that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.04 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify Architect/Engineer seven (7) days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- D. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- E. Verify that wiring and support components for equipment are complete and tested.
- F. Execute start-up under supervision of applicable Contractors' personnel in accordance with manufacturers' instructions.
- G. Submit a written report in accordance with Section 01300 that equipment or system has been properly installed and is functioning correctly.

1.05 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel two (2) weeks prior to date of Substantial Completion.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season.
- C. Utilize Operation and Maintenance Manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- D. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time at the site.

1.06 TESTING, ADJUSTING AND BALANCING

- A. Contractor will appoint and employ services of an independent firm to perform testing, adjusting, and balancing. Contractor shall pay for services.
- B. See mechanical specifications for specific requirements.
- C. Reports will be submitted by the independent firm to the Architect/Engineer indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.

1.07 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- F. Prohibit traffic from landscaped areas.

1.08 USE OF BUILDING

- A. Contractor shall allow the owner use of the substantially completed building for placement and installation of equipment. Such use of the structure shall not signify that the owner accepts the building.
- B. The existing building will continue in use by the owner during construction.
- C. The contractor will be responsible for any damage to existing building by general contractor or any of their subcontractors.

PART 2 PRODUCTS

2.01 NOT USED

PART 3 EXECUTION

3.01 NOT USED

END OF SECTION

**SECTION 01 7329
CUTTING AND PATCHING**

PART 1 GENERAL

1.01 SCOPE

- A. Execute cutting (including excavating), 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 work not conforming to the requirements of contract documents.
 - 5. Remove samples of installed work as specified for testing.
- B. Do not endanger any work by cutting or altering work or any part of it.
- C. Do not cut or alter work of another contractor without written consent of architect/engineer.

1.02 SUBMITTALS

- A. Prior to cutting which affects structural safety of project, or work of another contractor, submit written notice to architect/engineer, requesting consent to proceed with cutting, including:
 - 1. Identification of project
 - 2. Description of affected work
 - 3. Necessity for cutting
 - 4. Affect on other work, on structural integrity of project
 - 5. Description of proposed work. Designate:
 - a. Scope of cutting and patching
 - b. Contractor and trades to execute work
 - c. Products proposed to be used
 - d. Extent of refinishing
 - 6. Alternatives to cutting and patching
 - 7. Designation of party responsible for costs of cutting and patching
- B. Prior to cutting and patching done on instruction of architect/engineer, submit cost estimate.
- C. Should conditions of work, or schedule, indicate a change of materials or methods, submit written recommendation to architect/engineer, including:
 - 1. Conditions indicating change
 - 2. Recommendations for alternative materials or methods
 - 3. Submittals as required for substitutions

1.03 PAYMENT OF COSTS

- A. Costs caused by ill-timed or defective work, or work not conforming to contract documents, including costs for additional services of architect/ engineer: party responsible for ill-timed, rejected, or non-conforming work.
- B. Work done on instructions of architect/engineer, other than defective or non-conforming work: owner.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Materials for replacement of work removed shall comply with specifications for 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. After uncovering work, inspect conditions affecting the 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 project.

3.03 PERFORMANCE

- A. Execute fitting and adjustment of products to provide finished installation to comply with specified tolerance, finishes.
- B. Execute excavating and backfilling by methods which will prevent damage to other work and will prevent settlement.
- C. Restore work which has been cut or removed; install new products to provide completed work in accord with requirements of contract documents.
- D. Refinish entire surfaces as necessary to provide an even finish.
 - 1. Continuous surfaces: to nearest intersections
 - 2. Assembly: entire refinishing

END OF SECTION

SECTION 01 7400 CLEANING

PART 1 GENERAL

1.01 SCOPE

- A. Maintain premises and public properties free from accumulations of waste, debris, and rubbish caused by operations.
- B. At completion of work, remove waste materials, rubbish, tools, equipment, machinery, and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.

1.02 RELATED SECTIONS

- A. Section 01 5719, Environment Protection
- B. Section 01 7300, Execution Requirements

1.03 SAFETY REQUIREMENTS

- A. Standards: Maintain project in accord with governing safety and insurance standards.
- B. Hazard Control:
 - 1. Store volatile wastes in covered metal containers, and remove from premises daily.
 - 2. Prevent accumulation of wastes which create hazardous conditions.
 - 3. Provide adequate ventilation during use of noxious substances.
- C. Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn or bury rubbish and waste materials on project site.
 - 2. Do not dispose of volatile wastes such as mineral spirit, oil, or paint thinner in storm or sanitary drains.
 - 3. Do not dispose of wastes into lakes, streams, or waterways.

PART 2 PRODUCTS

2.01 MATERIALS

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

PART 3 EXECUTION

3.01 DURING CONSTRUCTION

- A. Execute daily cleaning to ensure that building, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. At reasonable intervals during progress of work, clean site and public properties, and dispose of waste materials debris, and rubbish.
- C. Provide a dumpster at a location to be determined for debris; have emptied as required.
- D. Remove waste materials, debris, and rubbish from site and legally dispose of at public or private dumping areas off owner's property.
- E. Vacuum clean interior building areas when ready to receive finish painting, and continue vacuum cleaning on as-needed basis until building is ready for substantial completion or occupancy.
- F. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet, newly-painted surfaces.

3.02 FINAL CLEANING

- A. Employ experienced workmen or professional cleaners for final cleaning.

- B. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior surfaces so designated to shine finish.
- C. Repair, patch, and touch up marred surfaces to specified finish, to match adjacent surfaces.
- D. Broom clean paved surfaces; rake clean other surfaces of grounds.
- E. Replace air conditioning filters if units were operated during construction.
- F. Maintain cleaning until project, or portion thereof, is occupied by owner.

END OF SECTION

**SECTION 01 7700
CLOSEOUT PROCEDURES**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Required documents for final payment.

1.02 RELATED SECTIONS

- A. Section 01 7800, Closeout Submittals
- B. Section 00 6000, Project Forms
- C. Section 01 7839, Project Record Documents

1.03 REQUIRED DOCUMENTS FOR FINAL PAYMENT

- A. Contractor to notify the architect in writing that all punch list items are complete and the project is ready for acceptance by the owner.
- B. "Substantial Completion" will be issued by the architect, at which time the contractor shall submit the "Final Pay Request".

1.04 DOCUMENTS TO BE SUBMITTED WITH FINAL PAY REQUEST

- A. Consent of Surety to Final Payment.
- B. Affidavit of Payment of Debts and Claims.
- C. Affidavit of Release of Liens.
- D. Required Operation and Maintenance Data.
- E. Required Warranties.
- F. Special Inspection reports.
- G. Project Record Documents

PART 2 PRODUCTS

2.01 NOT USED

PART 3 EXECUTION

3.01 NOT USED

END OF SECTION

SECTION 01 7800
CLOSE-OUT SUBMITTALS

SECTION INCLUDES

1.01 OPERATION AND MAINTENANCE DATA

- A. Operation and Maintenance Data
- B. Manual for Materials and Finishes
- C. Manual for Equipment and Systems
- D. Product Warranties and Product Bonds
- E. Special Inspection Reports

1.02 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 x 11 inch pages, two D size ring binders with durable plastic covers.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- E. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of Architect/Engineer, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions arranged by system and subdivided by specification section. For each category, identify names, addresses, and telephone numbers of Subcontractors and suppliers. Identify the following:
 - a. Significant design criteria.
 - b. List of equipment.
 - c. Parts list for each component.
 - d. Operating instructions.
 - e. Maintenance instructions for equipment and systems.
 - f. Maintenance instructions for finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following:
 - a. Shop drawings and product data.
 - b. Air and water balance reports.
 - c. Certificates.
 - d. Photocopies of warranties and bonds.
 - 4. Submit (2) two hard copy sets of final volumes and (2) copies on USB flash memory, within 10 days after final inspection.
 - 5. Final pay request will not be processed until all close-out documents are received.

1.03 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit two copies of manual within 10 days after final inspection. Manual to be as described in 1.02, A-E above.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- C. Building Products, Applied Materials, and Finishes: Include product data, with catalog number, size, composition, and color and texture designations.
- D. Instructions for Care and Maintenance: Include manufacturer's recommendations for cleaning

agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

- E. Moisture Protection and Weather Exposed Products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- F. Additional Requirements: As specified in individual product specification sections.
- G. Provide a listing in Table of Contents for design data, with tabbed fly sheet and space for insertion of data.
- H. Final pay request will not be processed until all close-out documents are received.

1.04 MANUAL FOR EQUIPMENT AND SYSTEMS

- A. Submit two copies of manual within 10 days after final inspection. Manual to be as described in 1.02, A-E above.
- B. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit documents within ten days after acceptance.
- C. Each Item of Equipment and Each System: Include description of unit or system, and component parts. Identify function, normal operating characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and model number of replaceable parts.
- D. Panel board Circuit Directories: Provide electrical service characteristics, controls, and communications.
- E. Include color coded wiring diagrams as installed.
- F. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- G. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- H. Provide servicing and lubrication schedule, and list of lubricants required.
- I. Include manufacturer's printed operation and maintenance instructions.
- J. Include sequence of operation by controls manufacturer.
- K. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- L. Provide control diagrams by controls manufacturer as installed.
- M. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- N. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- O. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- P. Include test and balancing reports.
- Q. Additional Requirements: As specified in individual product specification sections.
- R. Provide a listing in Table of Contents for design data, with tabbed dividers and space for insertion of data.

- S. Final pay request will not be processed until all close-out documents are received.

1.05 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
- C. Verify that documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Provide Table of Contents and assemble in three D side ring binder with durable plastic cover.
- F. Submit prior to final Application for Payment.
- G. Time Of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within ten days after acceptance.
 - 2. Make other submittals within ten days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within ten days after acceptance, listing the date of acceptance as the beginning of the warranty or bond period.

1.06 NUMBER OF MANUALS

- A. Manuals required in 1.02, 1.03, 1.04 and 1.05 may be combined into one or two manuals if volume of data will permit use of D size ring binders.

PART 2 PRODUCTS

2.01 NOT USED

PART 3 EXECUTION

3.01 NOT USED

END OF SECTION

**SECTION 01 7839
PROJECT RECORD DOCUMENTS**

PART 1 - GENERAL

1.01 DOCUMENTS:

- A. Maintain at the job site, one copy of:
 - 1. Contract drawings
 - 2. Specifications
 - 3. Addenda
 - 4. Reviewed shop drawings
 - 5. Change Orders
 - 6. Other modifications to contract
 - 7. Field test records
- B. Maintain one set of documents in clean, dry, legible condition; documents not to be used for construction purposes.
- C. Record all changes made during construction with red pencil.

1.02 RECORDING

- A. Label each document "Project Record" in 2" high printed letters.
- B. Keep record documents current.
- C. Do not permanently conceal any work until required information has been recorded.
- D. Contract Drawings: Legibly mark up to record actual construction:
 - 1. Horizontal and vertical location of underground utilities and appurtenances referred to permanent surface improvements.
 - 2. Location of internal utilities and appurtenances concealed in construction referenced to visible and accessible features of structure.
 - 3. Field changes of dimension and detail.
 - 4. Changes made by change order or field order.
 - 5. Details not on original contract drawings.
- E. Specifications and Addenda: Legibly mark up each section to record:
 - 1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
 - 2. Changes made by change order or field order.
 - 3. Other matters not originally specified.
- F. Shop Drawings: Maintain as record documents; legibly annotate following drawings to record changes made after review:
 - 1. Plumbing
 - 2. Mechanical

1.03 SUBMITTAL

- A. At completion of project, deliver documents to architect.
 - 1. (1) One hard copy and (1) digital copy on DVD, CD, or USB Flash memory.
- B. Record documents to be submitted with Final Pay Request.
- C. Final payment will be not be made until all closeout documents are received by the Architect.

PART 2 PRODUCTS

NOT USED.

PART 3 EXECUTION

NOT USED.

END OF SECTION