

# PROJECT MANUAL

FOR

BARTLETT CITY SCHOOL

BON LIN MIDDLE SCHOOL PAINT UPGRADES

3862 N GERMANTOWN PKWY  
BARTLETT, TN 38133

April 5, 2024



5101 WHEELIS DRIVE, SUITE 215  
MEMPHIS TN 38117  
901.767.3924



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**SECTION 01 10 00  
SUMMARY**

**PART 1 GENERAL**

**1.01 PROJECT**

- A. Project Name: Bartlett City Schools Bon Lin Middle School Paint Upgrades
  - 1. 3862 N Germantown Pkwy, Bartlett, TN 38133
- B. Owner's Name: Bartlett City Schools.
- C. Architect's Name: 4FDesign
- D. The Project consists of paint upgrades in common areas (corridors, restrooms, gym, and cafeteria).

**1.02 CONTRACT DESCRIPTION**

- A. Contract Type: A single Construction Manager at Risk with sub-contractor agreements as described in Section 005000 Construction Subcontract Agreement.

**1.03 DESCRIPTION OF WORK**

- A. Abbreviated Written Summary of Work, summarized as follows:
  - 1. Interior painting of previously painted CMU walls, hollow metal doors and frames, concrete toilet partitions and gypsum board ceilings, handrails and related items.

**1.04 OWNER OCCUPANCY**

- A. Owner intends to occupy the Project by August 1, 2024.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.
- D. Owner intends to continuously occupy the buildings except as outlined in published school instruction calendar.

**1.05 CONTRACTOR USE OF SITE AND PREMISES**

- A. Arrange use of site and premises to allow:
  - 1. Work by Others.
  - 2. Work by Owner.
  - 3. Typical School Functions including:
    - a. Bus/car loading/unloading
    - b. Teacher parking
    - c. Athletic events and after school events
    - d. Etc.
- B. Provide access to and from site as required by law and by Owner:
  - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 20 00  
PRICE AND PAYMENT PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Correlation of Contractor submittals based on changes.
- E. Procedures for preparation and submittal of application for final payment.

**1.02 RELATED REQUIREMENTS**

- A. Section 00 52 00 - Agreement Form: Contract Sum, retainages, payment period, monetary values of unit prices.
- B. Document 00 72 00 - General Conditions and Document 00 73 00 - Supplementary Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- C. Section 01 21 00 - Allowances: Payment procedures relating to allowances.
- D. Section 01 22 00 - Unit Prices: Monetary values of unit prices; Payment and modification procedures relating to unit prices.

**1.03 SCHEDULE OF VALUES**

- A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.
- B. Forms filled out by hand will not be accepted.
- C. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet. Contractor's standard form or electronic media printout will be considered.
- D. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- E. Revise schedule to list approved Change Orders, with each Application For Payment.

**1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.
- C. Forms filled out by hand will not be accepted.
- D. Present required information in typewritten form.
- E. Form: AIA G702 Application and Certificate for Payment and AIA G703 Continuation Sheet including continuation sheets when required.
  - 1. Show work in progress for each separate schedule of values (Shell and Interior).
- F. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place and Stored Materials under this Application.
  - 6. Authorized Change Orders.
  - 7. Total Completed and Stored to Date of Application.
  - 8. Percentage of Completion.
  - 9. Balance to Finish.

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- 10. Retainage.
- G. Execute certification by signature of authorized officer.
- H. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- I. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- J. Submit electronic copies of each Application for Payment.
- K. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 30 00.
  - 2. Construction progress schedule, revised and current as specified in Section 01 30 00.
  - 3. Partial release of liens from major subcontractors and vendors.
- L. When Architect requires substantiating information, submit data justifying dollar amounts in question. Provide one copy of data with cover letter for each copy of submittal. Show application number and date, and line item by number and description.

**1.05 MODIFICATION PROCEDURES**

- A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.
- B. Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time as authorized by the Conditions of the Contract by issuing supplemental instructions on AIA Form G710.
- C. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- D. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.
- E. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Sections 01 25 13 and 01 25 33.
- F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
  - 1. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect.
  - 2. For pre-determined unit prices and quantities, the amount will based on the fixed unit prices.
- G. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, provide the following data:
    - a. Quantities of products, labor, and equipment.
    - b. Taxes, insurance, and bonds.
    - c. Overhead and profit.
    - d. Justification for any change in Contract Time.
    - e. Credit for deletions from Contract, similarly documented.
  - 2. Support each claim for additional costs with additional information:
    - a. Origin and date of claim.

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- b. Dates and times work was performed, and by whom.
  - c. Time records and wage rates paid.
  - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
- H. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
  - I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
  - J. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

**1.06 APPLICATION FOR FINAL PAYMENT**

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
  - 1. All closeout procedures specified in Section 01 70 00.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 21 00  
ALLOWANCES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Cash allowances.
- B. Contingency allowance.
- C. Inspecting and testing allowances.
- D. Payment and modification procedures relating to allowances.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 20 00 - Price and Payment Procedures: Additional payment and modification procedures.

**1.03 CASH ALLOWANCES**

- A. Costs Included in Cash Allowances: Cost of product to Contractor or subcontractor, less applicable trade discounts, less applicable taxes.
- B. Architect 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 Responsibilities:
  - 1. Assist Architect in selection of products, suppliers , and installers.
  - 2. Obtain proposals from suppliers and installers and offer recommendations.
  - 3. On notification of which products have been selected, execute purchase agreement with designated supplier and installer.
  - 4. Arrange for and process shop drawings, product data, and samples. Arrange for delivery.
  - 5. 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.
- E. At closeout of Contract, funds remaining in Allowance will be credited to Owner by Change Order.

**1.04 CONTINGENCY ALLOWANCE**

- A. Contractor's costs for products, delivery, installation, labor, insurance, payroll, taxes, bonding, equipment rental, overhead and profit will be included in Change Orders authorizing expenditure of funds from this Contingency Allowance.
- B. Funds will be drawn from the Contingency Allowance only by Construction Change.
- C. At closeout of Contract, funds remaining in Allowance will be credited to Owner by Change Order.

**1.05 INSPECTING AND TESTING ALLOWANCES**

- A. Costs Included in Inspecting and Testing Allowances: Cost of engaging an inspecting or testing agency; execution of inspecting and tests; and reporting results.
- B. Costs Not Included in the Inspecting and Testing Allowances:
  - 1. Costs of incidental labor and facilities required to assist inspecting or testing agency.
  - 2. Costs of testing services used by Contractor separate from Contract Document requirements.
  - 3. Costs of retesting upon failure of previous tests as determined by Architect.
- C. Payment Procedures:

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1. Submit one copy of the inspecting or testing firm's invoice with next application for payment.
  2. Pay invoice on approval by Architect.
- D. Differences in cost will be adjusted by Change Order.
- E. At closeout of Contract, funds remaining in Allowance will be credited to Owner by Change Order.

**1.06 ALLOWANCES SCHEDULE**

- A. Contractor Contingency: \$3% of construction cost
- B. Owner Contingency: \$3% of construction cost

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 22 00  
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 RELATED REQUIREMENTS**

- A. Section 01 20 00 - Price and Payment Procedures: Additional payment and modification procedures.

**1.03 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.

**1.04 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.

**1.05 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 Architect.
- C. Take all measurements and compute quantities. Measurements and quantities will be verified by Owner.
- D. Architect will take all measurements and compute quantities accordingly.
- E. Owner will take all measurements and compute quantities accordingly.
- F. Assist by providing necessary equipment, workers, and survey personnel as required.
- G. Measurement Devices:
  - 1. Weigh Scales: Inspected, tested and certified by the applicable state Weights and Measures department within the past year.
  - 2. Platform Scales: Of sufficient size and capacity to accommodate the conveying vehicle.
  - 3. Metering Devices: Inspected, tested and certified by the applicable state department within the past year.
- H. Measurement by Weight: Concrete reinforcing steel, rolled or formed steel or other metal shapes will be measured by handbook weights. Welded assemblies will be measured by handbook or scale weight.
- I. Measurement by Volume: Measured by cubic dimension using mean length, width and height or thickness.
- J. Measurement by Area: Measured by square dimension using mean length and width or radius.
- K. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.
- L. Stipulated Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.
- M. Perform surveys required to determine quantities, including control surveys to establish measurement reference lines. Notify Architect prior to starting work.

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- N. Contractor's Engineer Responsibilities: Sign surveyor's field notes or keep duplicate field notes , calculate and certify quantities for payment purposes.

**1.06 PAYMENT**

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit 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.

**1.07 DEFECT ASSESSMENT**

- A. Replace Work, or portions of the Work, not complying with specified requirements.
- B. If, in the opinion of Architect, it is not practical to remove and replace the Work, Architect will direct one of the following remedies:
  - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Architect.
  - 2. The defective Work will be partially repaired to the instructions of the Architect, and the unit price will be adjusted to a new unit price at the discretion of Architect.
- C. If, in the opinion of Owner, it is not practical to remove and replace the Work, Owner will direct one of the following remedies:
  - 1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Owner.
  - 2. The defective Work will be partially repaired to the instructions of the Owner, and the unit price will be adjusted to a new unit price at the discretion of Owner.
- D. The individual specification sections may modify these options or may identify a specific formula or percentage price reduction.
- E. The authority of Architect to assess the defect and identify payment adjustment is final.
- F. The authority of Owner to assess the defect and identify payment adjustment is final.

**1.08 SCHEDULE OF UNIT PRICES**

- A. Paint walls in typical classroom: \_\_\_\_\_SF

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 25 13  
PRODUCT SUBSTITUTION PROCEDURES**

**PART 1 GENERAL**

**1.01 SUBSTITUTIONS:**

- A. Procedures:
  - 1. Instructions to Bidders specify time restrictions for submitting requests for substitutions during bidding period.
  - 2. No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.
- B. Substitute products should not be ordered and shall not be installed without written approval or acceptance from Designer. Contractor assumes all risks associated with premature ordering and installation of substitute products.
- C. The specifically named manufacturers, products, and systems, and descriptive characteristics used in the Contract Documents normally serve only to establish a level of quality and a performance standard. Unless specific restriction is placed upon an item in the specifications, Contractor may submit proposals for substitutions. The Owner reserves the right to disallow substitutions. Contractor assumes risks associated with possible rejection of proposals for substitution submitted during the life of the contract.
- D. Delays caused by tardiness of Contractor in preparing and forwarding submittals do not constitute an acceptable basis for consideration of substitute products. Delays due to factors which were in effect prior to project bidding do not constitute an acceptable basis for consideration of substitute products.
- E. Owner may entertain substitution request after Contractor award if a cost/time savings is identified. The Owner reserves the right to disallow substitutions. Contractor assumes risks associated with possible rejection of proposals for substitution submitted during the life of the contract.

**1.02 SUBSTITUTION REQUEST FORM:**

- A. Requests for substitutions shall be submitted to Designer on the form exhibited as Section 01 25 33, or in a similar format which provides the same or more information.
- B. When making requests for substitutions, Contractor assumes the following responsibilities:
  - 1. To have personally investigated the proposed substitute product and determined it is equal or superior in all respects to that specified;
  - 2. To provide the same warranty for substitute that Contractor would for that specified;
  - 3. To provide complete cost data, and waive all claims for additional costs related to substitution which subsequently become apparent; and
  - 4. To coordinate installation of the accepted substitute, making such changes as may be required for Work to be complete in all respects.

**END OF SECTION**

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**SECTION 01 30 00  
ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Preconstruction meeting.
- B. Progress meetings.
- C. Construction progress schedule.
- D. Progress photographs.
- E. Coordination drawings.
- F. Requests for Information (RFI's)
- G. Submittals for review, information, and project closeout.
- H. Number of copies of submittals.
- I. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. Drawings and General Provisions of Contract, including General Conditions and other Division 01 Specifications apply to work of this section.
- B. Document 00 72 00 - General Conditions of the Contract for Construction
- C. Section 01 74 19 - Construction Waste Management and Disposal
- D. Section 01 70 00 - Execution & Closeout Requirements
- E. Section 01 78 00 - Closeout Submittals

**1.03 PROJECT COORDINATOR**

- A. Project Coordinator: responsibilities are under the jurisdiction of the Construction Manager/General Contractor.
- B. Coordinate both the procedural timing and the listing (naming and sequencing) of reports/activities required by provisions of this section and other sections, to afford consistency and logical coordination between submitted reports or lists. Maintain coordination and correlation between separate reports by updating at monthly or shorter time intervals. Make appropriate distribution of each report and updated report to entities involved in the work including Designer and Owner. In particular, provide close coordination of progress schedule, schedule of values, listing of subcontracts, schedules of submittals, progress reports, and payment requests.
- C. Cooperate with the Project Coordinator in allocation of mobilization areas of site; for field offices and sheds, for storage of materials & Vehicular access, traffic, and parking facilities.
- D. During construction, coordinate use of site and facilities through the Project Coordinator.
- E. Comply with Project Coordinator's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- F. Comply with instructions of the Project Coordinator for use of temporary utilities and construction facilities. Responsibility for providing temporary utilities and construction facilities is identified in Section 01 10 00 - Summary.
- G. Coordinate field engineering and layout work under instructions of the Project Coordinator.
- H. Make the following types of submittals to Designer through the Project Coordinator:
  - 1. Requests for Interpretation.
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.

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5. Manufacturer's instructions and field reports.
6. Applications for payment and change order requests.
7. Progress schedules.
8. Coordination drawings.
9. Closeout submittals.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PRECONSTRUCTION MEETING**

- A. Designer will schedule a meeting after Notice of Award.
- B. The Pre-Construction Conference shall be attended by the Contractor's:
  1. (Office) Job Manager
  2. (Field) Job Superintendent
  3. Major subcontractors' representatives
  4. Major suppliers' representatives
  5. Others, as desired
- C. Agenda:
  1. Execution of Owner Contractor Agreement.
  2. Relation to coordination of Prime Contractor.
  3. Designation of responsible personnel.
  4. Submission of executed bonds and insurance certificates.
  5. Distribution of Contract Documents.
  6. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
  7. Designation of personnel representing the parties to Contractor and Architect.
  8. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures and close out documents.
  9. Handling of materials to permit inspection.
  10. Scheduling.
  11. Distribution of Submittals
  12. Sequence of critical work. Review of schedules
  13. Trades whose work will require pre-start up and workmanship review meetings.
  14. Use of Premises
    - a. Access to site
    - b. Field Office and Storage Areas
    - c. Owner's Requirements
  15. Major equipment deliveries and priorities
  16. Storage of material off - site
  17. Construction waste management, recycling, and disposal
  18. Security procedures affecting owner's property
  19. Payment procedures after substantial completion
  20. Additional items and subjects requested by the owner, Designer and General Contractor
- D. Designer (or designated construction administrator) will act as chairperson of the meetings. Chairperson will distribute and forward Records of meeting minutes and distribute copies within four (4) days after meeting to participants, with One (1) copy to General Contractor, Owner, participants, and those affected by decisions made.

**3.02 PROGRESS MEETINGS**

- A. Designer (or designated construction administrator) to schedule and administer meetings throughout progress of the Work at maximum bi-weekly intervals.

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- B. General: In addition to specific coordination meetings for each element of work and other regular project meetings for other purposes, hold a general progress meeting each month. Require each entity then involved in planning, coordination or performance of work to be properly represented at each meeting. Review each entity's present and future needs including interface requirements, time, sequences, deliveries, access, site utilization, temporary facilities and services, hours of work, hazards and risks, house-keeping, change orders, and documentation of information for payment requests. Discuss whether each element of current work is ahead of schedule, on time, or behind time in relation to updated progress schedule. Determine how behind-time work will be expedited, and secure commitments from entities involved in doing so. Discuss whether schedule revisions are required to ensure that current work and subsequent work will be completed within Contract Time. Review everything of significance which could affect progress of the work
- C. Designer (or designated construction administrator) will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- D. Attendance Required:
  - 1. (Office) Job Manager
  - 2. (Field) Job Superintendent
  - 3. Subcontractors' representatives, as befits the agenda
  - 4. Suppliers' representatives, as befits the agenda
  - 5. Others, as appropriate
- E. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review of work progress.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems that impede, or will 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. Maintenance of quality and work standards.
  - 11. Effect of proposed changes on progress schedule and coordination.
  - 12. Other business relating to Work. Other current business
- F. Designer (or designated construction administrator) to distribute record meeting minutes and distribute copies within (4) Four days after meeting to participants, with (1) One copy to General Contractor, Owner, participants, and those affected by decisions made.

**3.03 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 01 32 16**

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within (21) Twenty One days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit updated schedule with each Application for Payment.

**3.04 SCHEDULE OF VALUES**

- A. General: Prepare schedule of values, as required by General Conditions, in coordination with the preparation of progress schedule. Correlate line items with other administrative schedules

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and forms required for the work, including progress schedule, payment request form, listing of subcontractors, schedule of allowances, schedule of alternates, listing of products and principal suppliers and fabricators, and schedule of submittals. Provide breakdown of Contract Sum in sufficient detail to facilitate continued evaluation of payment requests and progress reports. Break down principal subcontract amounts into several line items. Round off the nearest whole dollar, but with total equal to Contract Sum. Submit copies of schedule of values to Designer and Owner on AIA Form G703 - Continuation Sheet.

### **3.05 PAYMENT REQUESTS**

- A. See 01 20 00

### **3.06 COORDINATION DRAWINGS**

- A. Provide information required by Project Coordinator for preparation of coordination drawings.
- B. As-built documents are to be updated by the Superintendent and forwarded to the owner in the close out documents for their use and record. As-Built documents are to be kept on site and reviewed periodically by the Designer or designated construction administrator.

### **3.07 REQUESTS FOR INFORMATION (RFI'S)**

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified or on the contractor's letterhead in numerical order.
  - 1. Designer will return RFI's submitted to Designer by other entities controlled by Contractor with no response.
  - 2. Coordinate and submit RFI's in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
  - 1. Project Name
  - 2. Project Number/SBC Number
  - 3. Date
  - 4. Name of Contractor
  - 5. Name of Designer and Construction Manager
  - 6. RFI number, numbered sequentially
  - 7. RFI subject
  - 8. Specification section number and title and related paragraphs, as appropriate
  - 9. Drawing number and detail reference, as appropriate
  - 10. Field dimensions and conditions, as appropriate
  - 11. Contractor's suggested resolution, If Contractor's solution(s) impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  - 12. Contractor's signature
  - 13. Attachments: Include sketches, descriptions, measurements, photos, product data, shop drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. Designer's and Construction Manager's Action: Designer and Construction Manager will review each RFI, determine action required, and respond. Allow fourteen (14) working days for Designer's response for each RFI.
- D. If Contractor believes the RFI response warrants change in Contract Time or Contract Sum, notify Designer and Construction Manager in writing within Ten (10) days of receipt of the RFI response.

### **3.08 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  - 1. Product data.
  - 2. Shop drawings.

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3. Samples for selection.
  4. Samples for verification.
- B. Submit to Designer for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.
  - C. Samples will be reviewed for aesthetic, color, or finish selection.
  - D. After review, provide copies and distribute in accordance with Submittal Procedures article below and for record documents purposes described in Section 01 78 00 - Closeout Submittals.

### **3.09 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  1. Design data.
  2. Sustainable Design Guidelines submittals and reports.
  3. Certificates.
  4. Test reports.
  5. Inspection reports.
  6. Manufacturer's instructions.
  7. Manufacturer's field reports.
  8. Other types indicated.

### **3.10 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout:
  1. Project record documents.
  2. Operation and maintenance data.
  3. Warranties.
  4. All other items required by specifications for closeout.
  5. 10% additional materials for attic stock (properly labeled)
  6. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### **3.11 NUMBER OF COPIES OF SUBMITTALS**

- A. Documents for Review:
  1. Electronic submittals in PDF format preferred.
- B. Documents for Information:
  1. Electronic submittals in PDF format preferred. If paper, submit only 2 copies.
- C. Documents for Project Closeout: Make one reproduction of submittal originally reviewed. Submit one extra of submittals for information.
- D. Samples: Submit the number specified in individual specification sections; one of which will be retained by Designer
  1. After review, produce duplicates.
  2. Retained samples will not be returned to General Contractor unless specifically so stated.

### **3.12 SUBMITTAL PROCEDURES**

- A. General Requirements:
- B. Shop Drawing Procedures:
  1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.
  2. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.
- C. Transmit each submittal with a copy of approved submittal form.

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- D. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
- E. Identify Project, General Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.
- F. Apply General Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.
- G. Deliver submittals to Designer at business address.
- H. Schedule submittals to expedite the Project, and coordinate submission of related items.
- I. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.
- J. Provide space for general Contractor and Designer review stamps.
- K. When revised for resubmission, identify all changes made since previous submission.
- L. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

**END OF SECTION**



**SECTION 01 31 90  
ADMINISTRATIVE LOGS**

**PART 1 GENERAL**

**1.01 SUBMITTALS LOG**

- A. If any shop drawings, product data, or sample submittals are required by the Contract Documents, maintain a submittal log to record the status of submittals made to the Designer.
  - 1. Submit one (1) copy with each application for payment.
  - 2. Clearly identify the Project.
  - 3. Record activities with respect to shop drawings, product data, samples, and such other submittals which are required by the Contract Documents.
  - 4. Indicate for each submittal made to date:
    - a. Title or name, and type of submittal.
    - b. Date submitted to the Designer.
    - c. Date returned by the Designer.
    - d. General nature of the Designer's response.

**END OF SECTION**

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**SECTION 01 40 00  
QUALITY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. References and standards.
- B. Quality assurance submittals.
- C. Mock-ups.
- D. Control of installation.
- E. Tolerances.
- F. Testing and inspection services.
- G. Manufacturers' field services.

**1.02 RELATED REQUIREMENTS**

- A. Section 00 31 00 - Available Project Information
- B. Section 00 72 00 - General Conditions of the Contract for Construction
- C. Section 01 25 13 - Product Substitution Procedures
- D. Section 01 25 33 - Product Substitution Request Form
- E. Section 01 30 00 - Administrative Requirements
- F. Section 01 41 00 - Regulatory Requirements
- G. Section 01 45 33 - Code Required Special Inspections

**1.03 REFERENCE STANDARDS**

- A. ASTM C 1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008.
- B. ASTM C 1077 - Standard Practice for Laboratories Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Laboratory Evaluation; 2009.
- C. ASTM C 1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2009.
- D. 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; 2008.
- E. ASTM E 329 - Standard Specification for Agencies Engaged Construction Inspection and/or Testing; 2009.
- F. ASTM E 543 - Standard Specification for Agencies Performing Nondestructive Testing; 2009.

**1.04 SUBMITTALS**

- A. Testing Agency Qualifications:
  - 1. Prior to start of Work, submit agency name, address, and telephone number, and names of full time registered Engineer ( in the state where the work is being performed) and responsible officer.
  - 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
- B. Design Data: Submit for Designer's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- C. Test Reports: After each test/inspection, promptly submit two copies of report to Designer and to Contractor.
  - 1. Include:

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- a. Date issued.
  - b. Project title and number.
  - c. Name of inspector.
  - d. Date and time of sampling or inspection.
  - e. Identification of product and specifications section.
  - f. Location in the Project.
  - g. Type of test/inspection.
  - h. Results of test/inspection.
  - i. When requested by Designer, provide interpretation of results.
2. Test report submittals are for Designer's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Designer, in quantities specified for Product Data.
- 1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  - 2. Certificates may be recent or previous test results on material or product, but must be acceptable to Designer.
- E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- F. Manufacturer's Field Reports: Submit reports for Designer's benefit as contract administrator or for Owner.
- 1. Submit report in duplicate within 30 days of observation to Designer for information.
  - 2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
- G. Erection Drawings: Submit drawings for Designer's benefit as contract administrator or for Owner.
- 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
  - 2. Data indicating inappropriate or unacceptable Work may be subject to action by Designer or Owner.

**1.05 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 Designer before proceeding.

**1.06 TESTING AND INSPECTION AGENCIES**

- A. Refer to Section 01 45 33 Code Required Special Inspections.
- B. Testing Agency Duties:

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1. Provide qualified personnel at site. Cooperate with Designer and Contractor in performance of services.
  2. Perform specified sampling and testing of products in accordance with specified standards.
  3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  4. Promptly notify Designer and Contractor of observed irregularities or non-conformance of Work or products.
  5. Perform additional tests and inspections required by Designer or Owner.
  6. Submit reports of all tests/inspections specified.
- C. 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 Contractor.
  4. Agency has no authority to stop the Work.
- D. Contractor 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 and to manufacturers' facilities.
  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 Designer and laboratory 48 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 by Contractor beyond specified requirements.
  6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Designer. Payment for re-testing will be charged to Contractor by deducting testing charges from the Contract Price.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 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 Designer 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. Have Work performed 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.

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- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

### 3.02 MOCK-UPS

- A. Tests will be performed under provisions identified in this section and identified in the respective product specification sections.
- B. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- C. Accepted mock-ups shall be a comparison standard for the remaining Work.
- D. Where mock-up has been accepted by Designer and is specified in product specification sections to be removed, remove mock-up and clear area when directed to do so.

### 3.03 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 Designer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

### 3.04 TESTING AND INSPECTION

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
  - 1. Provide qualified personnel at site. Cooperate with Designer and Contractor in performance of services.
  - 2. Perform specified sampling and testing of products in accordance with specified standards.
  - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  - 4. Promptly notify Designer and Contractor of observed irregularities or non-conformance of Work or products.
  - 5. Perform additional tests and inspections required by Designer.
  - 6. Submit reports of all tests/inspections specified.
- C. 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 Contractor.
  - 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
  - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
  - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
  - 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 Designer and laboratory 48 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 by Contractor beyond specified requirements.

- 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Designer.
- F. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.
- G. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Designer. Payment for re testing will be charged to the Contractor by deducting testing charges from the Contract Price.

**3.05 MANUFACTURERS' 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 and as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Designer 30 days in advance of required observations.
  - 1. Observer subject to approval of Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

**3.06 DEFECT ASSESSMENT**

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

**END OF SECTION**

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**SECTION 01 45 10  
QUALITY CONTROL**

**PART 1 GENERAL**

**1.01 GENERAL**

- A. All materials entering into construction of structure covered by this Contract shall be securely anchored and/or secured together in accordance with best quality for intended purposes. Wythes of masonry and corners of masonry walls and partitions shall be bonded together if possible, unless otherwise specifically shown, and where not bonded shall be secured with appropriate metal ties or anchors. Masonry walls shall be anchored to adjacent columns unless otherwise specifically shown. All wood, steel, concrete, or other framing shall be securely anchored and tied together and to supporting or abutting masonry. All veneers, finishes, and applied items shall be securely anchored and tied to the backing material. The Contractor shall ensure that, except for expansion joints or otherwise where materials are purposely separated, each and every piece of material entering into structures shall be bonded, anchored, tied, or otherwise secured in place in a permanent manner that will permit expansion, contraction, and other minor movements and normal use of structure without structural features becoming impaired or loose.
- B. All items shall be installed in a workmanship manner in accordance with best recognized practice. Manufactured items shall be installed in strict accordance with manufacturer's printed directions, specifications, and/or recommendations for an installation, shall be properly adjusted after installation and be left in perfect working order. All items in walls, floors, or roofs exposed to weather, or that shall otherwise subjected to flooding or wetting, shall be installed in such a manner as to ensure a permanent watertight and weather tight installation. Unless otherwise indicated, items exposed to weather, or subject to flooding or wetting, shall be installed so as to shed and not hold water. Items shall, in all cases, be installed plumb and/or in proper relationship to surrounding materials.
- C. When standard specifications such as American Society for Testing and Materials, Federal Specifications, Department of Commerce (Commercial Standards), American Institute of Steel Construction, or other well-known public or trade associations are cited as standard to govern materials and/or workmanship, such specifications, or portion thereof as referred to, shall be equally as binding and have full force and effect as though it were copied into these specifications.
- D. Such standard specifications as are mentioned are generally recognized by and available to trades concerned. Designers will, however, upon request of a bidder or Contractor, furnish for inspection a copy of any standard specification mentioned or direct bidder or Contractor to any easily available copy.
- E. Unless otherwise expressly stated, standard specifications referred to shall be considered as latest edition and/or revision of such specifications that is in effect on date of invitation for bids. In case of any conflicts between standard specifications and written portions of Contract Documents, the Contract Documents shall govern.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 50 00  
TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary utilities.
- B. Temporary telecommunications services.
- C. Temporary telephone and facsimile service.
- D. Temporary support and sanitary facilities.
- E. Temporary Controls: Barriers, enclosures, and fencing.
- F. Security requirements.
- G. Vehicular access and parking.
- H. Waste removal facilities and services.
- I. Project identification sign.
- J. Field offices.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 55 00 - Vehicular Access and Parking
- B. Section 01 58 13 - Temporary Project Signage

**1.03 TEMPORARY UTILITIES**

- A. Provide all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- B. Owner shall pay for all utility connection fees and utility usage.
- C. Use trigger-operated nozzles for water hoses, to avoid waste of water.

**1.04 TELECOMMUNICATIONS SERVICES**

- A. Telecommunications services shall include:
  - 1. Internet Connections: Minimum of one; DSL modem or faster.
  - 2. Email: Account/address reserved for project use.
  - 3. Facsimile Service: Minimum of one dedicated fax machine/printer.

**1.05 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

**1.06 BARRIERS**

- A. Provide protection for plants designated to remain. Replace damaged plants.
- B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.
- C. Traffic Controls: See Civil.

**1.07 FENCING**

- A. Construction: Contractor's option.
- B. Provide 6 foot (1.8 m) high construction fence around construction site; equip with vehicular and pedestrian gates with locks.

**1.08 SECURITY**

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.

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### **1.09 VEHICULAR ACCESS AND PARKING**

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.
- E. Existing parking areas located at temporary designated area may be used for construction parking until new parking lot is available.

### **1.10 WASTE REMOVAL**

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

### **1.11 PROJECT SIGNS - SEE SECTION 01 58 13**

### **1.12 VERMIN CONTROL**

- A. Provide necessary treatment to prevent an infestation of vermin. Maintain sanitary conditions to eliminate an environment which attracts and breeds vermin.

### **1.13 CONTROL OF DUST AND MUD**

- A. Establish One Entry Point: Control construction vehicle traffic by establishing only one entry/exit point.
- B. Watering to Control Dust: Use watering trucks to apply water on exposed dirt which could become airborne dust. Use as often as necessary to control dust on the site.
- C. Cleaning Mud off Construction Vehicles: Develop cleaning point with water hoses and catchment basin to pressure wash vehicles before they leave the site with mud on their wheels. Develop plan showing use of a filtering device at each storm drain inlet on adjacent streets to prevent clogging the storm sewer pipes with mud. If the adjacent road(s) becomes muddy, the Contractor shall wash down the road(s) to the satisfaction of the Owner. This cleaning shall extend as far as necessary to remove all mud and dirt generated by this project. Use water trucks and sweeping trucks as necessary to provide water for washing roads.

### **1.14 FIELD OFFICES**

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack, and drawing display table.
- B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.
- C. Provide (1) dedicated office space within temporary office for Architect.
- D. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

### **1.15 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.

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**PART 2 PRODUCTS - NOT USED**  
**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

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**SECTION 01 54 00  
CONSTRUCTION AIDS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Section 01 41 00 - Basic Regulatory Requirements
- B. Section 01 50 00 - Temporary Facilities and Controls

**1.02 RELATED REQUIREMENTS**

- A. Furnish, install and maintain required construction aids, and remove upon completion of work.

**PART 2 PRODUCTS**

**2.01 PRODUCTS**

- A. Materials may be new or used, suitable for the intended purpose, but must not violate requirements of applicable codes and standards.
- B. Provide construction aids and equipment requirements by personnel and to facilitate the execution of work; scaffolds, staging, ladders, stairs, ramps, runways, platforms, railings, hoists, cranes, chutes and other such facilities and equipment.
- C. Maintain all facilities and equipment in a first class condition.
- D. Provide temporary weather tight enclosure of exterior walls for successive areas of the building as work progresses. As necessary to provide acceptable working conditions, provide weather protection for interior materials, allow for effective temporary heating, and prevent entry of unauthorized persons.
  - 1. Provide temporary exterior doors with self-closing hardware and padlocks.
  - 2. Other enclosures shall be removable as necessary for work and for handling of materials.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Review site conditions and inform the Designer of any factors which will affect construction procedures and construction aids, including adjacent properties and public facilities which may be affected by execution of the work.
- B. Comply with Federal, State and Local Codes and Regulations.
- C. Comply with applicable requirements specified in sections of Division 02 through 33.
- D. Relocate construction aids as required by progress of construction, by storage of work requirements, and to accommodate legitimate requirements of Owner and other contractors employed at the site.
- E. Completely remove temporary materials, equipment and services:
  - 1. When construction needs can be met by use of permanent construction.
  - 2. At completion of the project.
- F. Clean and repair damage caused by installation or by use of temporary facilities.
  - 1. Remove foundations and underground installations for construction aids.
  - 2. Grade the areas of the site affected by temporary installations to required elevations and slopes, and clean the area.
- G. Restore permanent facilities used for temporary purposes to specified condition or to conditions prior to when work commenced.

**END OF SECTION**

Bartlett City Schools Bon Lin Middle School Paint Upgrades	01 54 00 - 1	CONSTRUCTION AIDS
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**SECTION 01 56 00  
TEMPORARY BARRIERS**

**PART 1 - GENERAL**

**1.01 WORK INCLUDES:**

- A. Scope - Construct and maintain substantial barricades and fences as shall be required for the protection of all designated areas, trees and plant material to remain. Fenced area shall be at the drip line of trees.
- B. Silt fencing for SWPPP to be addressed by Civil Engineering & landscape documents & specifications. Contractor to maintain those barriers in a similar manner on a constant basis. Reference state environmental guidelines for additional maintenance requirements.

**PART 2 - PRODUCTS**

**2.01 MATERIALS**

- A. Provide 6'-0" temporary chain link fence with mesh fabric in locations as shown on civil drawings.
- B. Orange security mesh, Sentry Secura by Tenax Corporation min. of 6'-0" in height or Architect approved equal. Metal posts to be at 6'-0" min
  1. Fencing to be in rolls of 100'-0" lengths.
  2. Material to be high density polyethylene (HDPE), ultraviolet resistant, fully stabilized.
  3. Temperature range for this material is -60 degrees F to 180 degrees F
  4. Tensile Yield = 3,200 p.s.i., Ultimate Tensile Strength = 2,600 p.s.i.
  5. Nominal mesh opening 3" x 1 1/4", weight approx. 14 lbs per roll
- C. 4 x 4 treated wood posts at entrances. Posts to be a min. of 6'-0" in length at adequate depth to facilitate control of the drive areas.
- D. Plastic zip ties recommended and supplied by manufacturer for particular application.

**PART 3 - EXECUTION**

**3.01 INSTALLATION AND WORKMANSHIP**

- A. All material to be new and not reused from another construction project.
  1. All work under this heading shall be done by competent personnel. Contractor's work force to be adequately supervised.
  2. Remove all barriers at the completion of the work and clean up area to leave it in a clean, neat, orderly condition.
- B. If engineer specified a specific fence installation, those supercede the recommendations below.
- C. Installation
  1. Posts to be installed at no more than 6'-0" apart.
  2. Posts to be installed a min. of 2'-0" into the earth or as necessary to ensure stability for the purpose required.
  3. Metal U post and or Rebar not recommended as supports for safety fencing.
  4. Safety fencing to be pulled taught and secure to posts. Fencing to be attached with plastic zip ties. Loop the ties through the available holes or "teeth" in the post to prevent the fence from sliding down the post.
  5. For additional longevity, pull the safety fence taught and secure between flat side of the posts. When necessary, suspend the mesh fencing from a wire strung between the posts. Wire to be weaved through the mesh. Wire to be secured through both ends of the posts.
  6. To connect fence sections, overlap two ends by at least 6" and weave a wood slat through the overlapped strands. Secure the joined area to the post.

**END OF SECTION**

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**SECTION 01 57 21  
INDOOR AIR QUALITY CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Construction procedures to promote adequate indoor air quality before, during & after construction.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 40 00 - Quality Requirements
- B. Section 23 05 93 - Testing, Adjusting, and Balancing for HVAC

**1.03 PROJECT GOALS**

- A. Dust and Airborne Particulates: Prevent deposition of dust and other particulates in HVAC ducts and equipment.
  - 1. Cleaning of ductwork is not contemplated under this Contract.
  - 2. Contractor shall bear the cost of cleaning required due to failure to protect ducts and equipment from construction dust.
- B. Airborne Contaminants: Procedures and products have been specified to minimize indoor air pollutants.
  - 1. Furnish products meeting the specifications.
  - 2. Avoid construction practices that could result in contamination of installed products leading to indoor air pollution.

**1.04 REFERENCE STANDARDS**

- A. ASHRAE Std 52.2 - Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size; 2007.
- B. ASHRAE Std 62.1 - Ventilation For Acceptable Indoor Air Quality; 2007 (errata 2008).
- C. SMACNA (OCC) - IAQ Guideline for Occupied Buildings Under Construction; 2007.

**1.05 DEFINITIONS**

- A. Adsorptive Materials: Gypsum board, acoustical ceiling tile and panels, carpet and carpet tile, fabrics, fibrous insulation, and other similar products.
- B. Contaminants: Gases, vapors, regulated pollutants, airborne mold and mildew, and the like, as specified.
- C. Particulates: Dust, dirt, and other airborne solid matter.
- D. Wet Work: Concrete, coatings, and other products that emit water vapor or volatile organic compounds during installation, drying, or curing.

**1.06 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Indoor Air Quality Management Plan: Describe in detail measures to be taken to promote adequate indoor air quality upon completion; use SMACNA IAQ Guidelines for Occupied Buildings Under Construction as a guide.
  - 1. Submit not less than 60 days before enclosure of building.
  - 2. Identify potential sources of odor and dust.
  - 3. Identify construction activities likely to produce odor or dust.
  - 4. Identify areas of project potentially affected.
  - 5. Evaluate potential problems by severity and describe methods of control.
  - 6. Describe construction ventilation to be provided, including type and duration of ventilation, use of permanent HVAC systems, types of filters and schedule for replacement of filters.
  - 7. Describe cleaning and dust control procedures.
  - 8. Describe coordination with commissioning procedures.

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- C. Interior Finishes Installation Schedule: Identify each interior finish that either generates odors, moisture, or vapors or is susceptible to adsorption of odors and vapors, and indicate air handling zone, sequence of application, and curing times.
- D. Duct and Terminal Unit Inspection Report.

**PART 3 EXECUTION**

**2.01 CONSTRUCTION PROCEDURES**

- A. Prevent the absorption of moisture and humidity by adsorptive materials by:
  - 1. Sequencing the delivery of such materials so that they are not present in the building until wet work is completed and dry.
  - 2. Delivery and storage of such materials in fully sealed moisture-impermeable packaging.
  - 3. Provide sufficient ventilation for drying within reasonable time frame.
- B. Begin construction ventilation when building is substantially enclosed.
- C. If extremely dusty or dirty work must be conducted inside the building, shut down HVAC systems for the duration; remove dust and dirt completely before restarting systems.
- D. HVAC equipment and supply air ductwork may be used for ventilation during construction:
  - 1. Operate HVAC system on 100 percent outside air, with 1.5 air changes per hour, minimum.
  - 2. Ensure that air filters are correctly installed prior to starting use; replace filters when they lose efficiency.
- E. Do not store construction materials or waste in mechanical or electrical rooms.
- F. Prior to use of return air ductwork without intake filters clean up and remove dust and debris generated by construction activities.
  - 1. Inspect duct intakes, return air grilles, and terminal units for dust.
  - 2. Clean plenum spaces, including top sides of lay-in ceilings, outsides of ducts, tops of pipes and conduit.
  - 3. Clean tops of doors and frames.
  - 4. Clean mechanical and electrical rooms, including tops of pipes, ducts, and conduit, equipment, and supports.
  - 5. Clean return plenums of air handling units.
  - 6. Remove intake filters last, after cleaning is complete.
- G. Do not perform dusty or dirty work after starting use of return air ducts without intake filters.
- H. Use other relevant recommendations of SMACNA IAQ Guideline for Occupied Buildings Under Construction for avoiding unnecessary contamination due to construction procedures.
- I. Smoking or use of tobacco products in the building ( including chewing tobacco) is prohibited. Contractor to designate an area outside the project for smoking / use of tobacco. Location of designated tobacco use area to be a minimum of 25'-0" away from entrances, intakes or windows.
- J. Ductwork to be covered w/ plastic sheeting after installation. Limit dust & particulate matter from entering the ducts.
- K. Ductwork & mechanical components stored on site are to be covered w/ plastic sheeting and protected prior to installation.

**END OF SECTION**

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**SECTION 01 74 00  
CLEANING**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and other Division 01 Specifications apply to work of this section.

**1.02 GENERAL**

- A. Execute cleaning, during progress of the work, and at completion of the work, as required by General Conditions.
- B. Related Requirements in other parts of the Project Manual:
  - 1. Conditions of the Contract.
- C. Related Requirements specified in other sections:
  - 1. Section 01 10 00 - Summary
  - 2. Section 01 74 19 - Construction Waste Management and Disposal
  - 3. Cleaning for specific products of work: The specification section for that work.
- D. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

**PART 2 PRODUCTS**

**2.01 PRODUCTS**

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

**PART 3 EXECUTION**

**3.01 EXECUTION**

- A. Execute daily cleaning to keep the work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris resulting from construction operations.
- B. Provide on site containers for the collection of waste materials, debris and rubbish.
- C. Remove waste materials, debris and rubbish from the site periodically and dispose at a legal disposal area away from the site.
- D. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- E. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly coated surfaces.
- F. Employ skilled cleaning personnel for final cleaning.
- G. Remove grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, and other foreign materials from sight-exposed interior and exterior surfaces, including toilet fixtures, accessories, doors, windows and equipment.
- H. Wash and shine glazing and mirrors.
- I. Polish glossy surfaces to a clean shine.
- J. Ventilating Systems:
  - 1. Clean permanent filters and replace disposable filters if units were operated during construction.
  - 2. Clean ducts, blowers and coils if units were operated without filters during construction.

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- K. Broom clean exterior paved surfaces; rake clean other surfaces of the grounds.
- L. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight exposed interior and exterior surfaces, and all work areas, to verify that the entire work is clean.

**END OF SECTION**

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**SECTION 01 74 19  
CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL**

**PART 1 GENERAL**

**1.01 WASTE MANAGEMENT REQUIREMENTS**

- A. Owner requires that this project generate the least amount of trash and waste possible.
- B. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.
- C. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.
- D. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, incineration, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.
- E. Contractor shall develop and follow a Waste Management Plan designed to implement these requirements.
- F. Methods of trash/waste disposal that are not acceptable are:
  - 1. Burning on the project site.
  - 2. Burying on the project site.
  - 3. Dumping or burying on other property, public or private.
  - 4. Other illegal dumping or burying.
- G. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary
- B. Section 01 50 00 - Temporary Facilities and Controls
- C. Section 01 70 00 - Execution & Closeout Requirements
- D. Section 31 10 00 - Site Clearing

**1.03 DEFINITIONS**

- A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.
- B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.
- C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.
- D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.
- E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.
- F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- I. Return: To give back reusable items or unused products to vendors for credit.

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- J. Reuse: To reuse a construction waste material in some manner on the project site.
- K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.
- M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- N. Toxic: Poisonous to humans either immediately or after a long period of exposure.
- O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

#### 1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements.
- B. Landfill Alternatives Proposal: Within 10 calendar days after receipt of Notice of Award of Bid, or prior to any trash or waste removal, whichever occurs sooner, submit a projection of trash/waste that will require disposal and alternatives to landfilling, with net costs.
  - 1. Submit to Designer for Owner's review and approval.
  - 2. Include an analysis of trash/waste to be generated and landfill options as specified for Waste Management Plan described below.
  - 3. Describe as many alternatives to landfilling as possible:
    - a. List each material proposed to be salvaged, reused, or recycled.
    - b. List the proposed local market for each material.
    - c. State the estimated net cost resulting from each alternative, after subtracting revenue from sale of recycled or salvaged materials and landfill tipping fees saved due to diversion of materials from the landfill.
  - 4. Provide alternatives to landfilling for at least the following materials:
    - a. Aluminum and plastic beverage containers.
    - b. Corrugated cardboard.
    - c. Wood pallets.
    - d. Land clearing debris, including brush, branches, logs, and stumps.
    - e. Concrete.
    - f. Bricks.
    - g. Concrete masonry units.
    - h. Asphalt paving.
    - i. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
- C. Submit Waste Management Plan within 10 calendar days after receipt of Notice of Award of Bid, or prior to any trash or waste removal, whichever occurs sooner; submit projection of all trash and waste that will require disposal and alternatives to landfilling.
- D. Waste Management Plan: Include the following information:
  - 1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.
  - 2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).
  - 3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
    - a. State the estimated net cost, versus landfill disposal.



4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.
  5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.
  6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.
- E. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
  2. Submit Report on a form acceptable to Owner.
  3. Landfill Disposal: Include the following information:
    - a. Identification of material.
    - b. Amount, in tons or cubic yards, of trash/waste material from the project disposed of in landfills.
    - c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
  4. Incinerator Disposal: Include the following information:
    - a. Identification of material.
    - b. Amount, in tons or cubic yards, of trash/waste material from the project delivered to incinerators.
    - c. State the identity of incinerators, total amount of fees paid to incinerator, and total disposal cost.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
  5. Recycled and Salvaged Materials: Include the following information for each:
    - a. Identification of material, including those retrieved by installer for use on other projects.
    - b. Amount, in tons or cubic yards, date removed from the project site, and receiving party.
    - c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
    - d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
    - e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
  6. Material Reused on Project: Include the following information for each:
    - a. Amount, in tons or cubic yards.
    - b. Include weight tickets as evidence of quantity.
  7. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 WASTE MANAGEMENT PROCEDURES**

- A. See Section 01 30 00 for additional requirements for project meetings, reports, submittal procedures, and project documentation.

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- B. See Section 01 50 00 for additional requirements related to trash/waste collection and removal of facilities and services.

**3.02 WASTE MANAGEMENT PLAN IMPLEMENTATION**

- A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.
- B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Designer.
- C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.
- D. Meetings: Discuss trash/waste management goals and issues at project meetings.
  - 1. Pre-construction meeting.
  - 2. Regular job-site meetings.
- E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
  - 1. Provide containers as required.
  - 2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
  - 3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.
- F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.
- G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.
- H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.
- I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

**END OF SECTION**

**SECTION 09 90 00  
PAINTING AND COATING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints, stains, and other coatings.
- C. See Schedule - Surfaces to be Finished, at end of Section.

**1.02 RELATED REQUIREMENTS**

- A. Section 09 06 00 - Finish Schedule

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on all finishing products, including VOC content.
- C. Samples: Submit two paper chip samples, 6 x 6 in size illustrating range of colors and textures available for each surface finishing product scheduled.
- D. Documentation from the manufacturer identifying VOC and chemical component limits.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section with minimum 3 years experience.
- C. Primer and top coat to be from the same manufacturer.

**1.05 REGULATORY REQUIREMENTS**

- A. Conform to applicable code for flame and smoke rating requirements for products and finishes.

**1.06 MOCK-UP**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for mock-up.
- B. Provide panel, 4 feet long by 4 feet wide, illustrating coating color, texture, and finish.
- C. Provide door and frame assembly illustrating paint coating color, texture, and finish.
- D. Mock-up may remain as part of the Work.

**1.07 DELIVERY, STORAGE, AND PROTECTION**

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

**1.08 EXTRA MATERIALS**

- A. Provide at least 1 gallon of each color and type in labeled containers.

**1.09 ENVIRONMENTAL REQUIREMENTS**

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

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## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Farrell Calhoun
- B. Substitutions: Refer to Section 01 25 13 Product Substitution Procedures and Section 01 25 33 Product Substitution Request Form
  - 1. Substitutions shall meet the original specification material characteristics including but not limited to chemical properties, durability, color, and sheen.

### **2.02 PAINTS AND COATINGS - GENERAL**

- A. Paints and Coatings: Ready mixed, except field-catalyzed coatings. Prepare pigments:
  - 1. To a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
  - 2. For good flow and brushing properties.
  - 3. Capable of drying or curing free of streaks or sags.
- B. Volatile Organic Compound (VOC) Content:
  - 1. Provide coatings that comply with the most stringent requirements specified in the following:
    - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
    - b. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Chemical Content: The following compounds are prohibited:
  - 1. Aromatic Compounds: In excess of 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
  - 2. Acrolein, acrylonitrile, antimony, benzene, butyl benzyl phthalate, cadmium, di (2-ethylhexyl) phthalate, di-n-butyl phthalate, di-n-octyl phthalate, 1,2-dichlorobenzene, diethyl phthalate, dimethyl phthalate, ethylbenzene, formaldehyde, hexavalent chromium, isophorone, lead, mercury, methyl ethyl ketone, methyl isobutyl ketone, methylene chloride, naphthalene, toluene (methylbenzene), 1,1,1-trichloroethane, vinyl chloride.

### **2.03 PAINT SYSTEMS - INTERIOR**

- A. Paint - Concrete/Masonry, Previously Painted Semi-Gloss Enamel:
  - 1. Two coats:
    - a. Farrell Calhoun 3300 Evergreen Lifetime 100% Acrylic Interior Semi-Gloss Enamel
    - b. Product Substitutions: See 01 25 13
- B. Paint - Ferrous Metals, Previously painted, Industrial Enamel
  - 1. Two coats:
    - a. Farrell Calhoun Tuff-Boy 800 Line Interior/Exterior Industrial Gloss Enamel
    - b. Product Substitutions: See 01 25 13
- C. Paint - Hollow Metal Doors and Frames and Concrete Toilet Partitions, previously painted, industrial enamel
  - 1. Two coats:
    - a. Farrell Calhoun Tuff-Boy 800 Line Interior/Exterior Industrial Gloss Enamel
    - b. Product Substitutions: See 01 25 13
- D. Paint - Gypsum Board/Plaster, previously painted, latex flat
  - 1. Two coats:
    - a. Farrell Calhoun Flat Latex 30.6% Vol. Solids (27 g/L VOC).

## 2.04 ACCESSORY MATERIALS

- A. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified; commercial quality.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. Verify that surfaces are ready to receive Work as instructed by the product manufacturer.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Test shop-applied primer for compatibility with subsequent cover materials.
- D. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
  - 1. Plaster and Gypsum Wallboard: 12 percent.
  - 2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.

### 3.02 PREPARATION

- A. Walls (previously painted)
  - 1. Identify areas where peeling
  - 2. Scuff edges of peeled areas to reduce the area peeling through with new color
  - 3. Clean from shoulder down to floor to eliminate hand oils (Vinegar 10:1 cut)
  - 4. Apply new color using 3300 Evergreen Semi Gloss
- B. Hollow Metal Doors and Frames and Concrete Toilet Partitions (previously painted)
  - 1. The ones with minimal peeling will get cleaned with a focus to remove adhesive left from tape, then coated with industrial enamel.
  - 2. The ones that have excessive amounts of peeled sections will need to be sanded with a focus of removing the latex paint off and then coated with 800 Line Industrial Enamel.
  - 3. Cleaning - Prior to applying any finishes, the diluted vinegar mix (cut with water 10:1) should be used to make sure the body oils are gone.

### 3.03 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- C. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless otherwise approved.
- D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

### 3.04 CLEANING

- A. Collect waste material which may constitute a fire hazard, place in closed metal containers, and remove daily from site.

### 3.05 SCHEDULE - SURFACES TO BE FINISHED

- A. Do Not Paint or Finish the Following Items:
  - 1. Items fully factory-finished unless specifically noted.
  - 2. Fire rating labels, equipment serial number and capacity labels.
  - 3. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
  - 4. Electrical cover plates, hardware, light fixture trim, escutcheons, and fittings
- B. Paint the surfaces described below under Schedule - Paint Systems.
- C. Mechanical and Electrical: Use paint systems defined for the substrates to be finished.

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1. Paint all insulated and exposed pipes occurring in finished areas to match background surfaces, unless otherwise indicated.
2. Paint shop-primed items occurring in finished areas.
3. Paint interior surfaces of air ducts and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint to visible surfaces.
4. Paint dampers exposed behind louvers, grilles, and convector and baseboard cabinets to match face panels.

**3.06 SCHEDULE - PAINT SYSTEMS**

- A. Concrete, Concrete Block, Brick Masonry: Finish all surfaces exposed to view.
- B. Gypsum Board: Finish all surfaces exposed to view.
- C. Steel Doors and Frames: Finish all surfaces exposed to view.
- D. Steel Fabrications: Finish all surfaces exposed to view.

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