

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General product requirements.
- B. Prohibition of asbestos-containing materials.
- C. Re-use of existing products.
- D. Storage and protection.
- E. Product option requirements.
- F. Substitution requirements and procedures.
- G. Procedures for Owner-Furnished-Contractor-Installed products.
- H. Spare parts and maintenance materials.

1.02 RELATED SECTIONS

- A. Instructions to Bidders and General Conditions: Product options and substitution procedures.
- B. Section 01 6201 - Pre-Bid Substitution Request.
- C. Section 01 6202 - Post-Bid Substitution Request.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Do not use products that contain 1 percent or more by weight of asbestos (asbestiform varieties of chrysotile (serpentine), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, tremolite, or actinolite)) .

2.03 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description, and comply with the remaining requirements of the project.
- B. Products Specified by Naming One or More Brand Name Products (or Manufacturers): Use one of the brand name products specified (or product of the manufacturers specified), and comply with the remaining requirements of the project.

2.04 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra products of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

- A. For time restrictions on substitution requests see the Invitation to Bidders and the General Conditions.
- B. Approval of substitutions after the award of contract may occur only by Contract Modification.
- C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request complying with the requirements specified herein.
- D. Substitution Submittal Procedure:
 - 1. Submit three copies of request for substitution for consideration. Limit each request to one proposed substitution.
 - 2. Accompany requests during the bidding period with a completed Pre-Bid Substitution Request as specified in Section 01 6201.
 - 3. Accompany requests after the award of contract with a completed Post-Bid Substitution Request as specified in Section 01 6202.
 - 4. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence. Burden of proof is on proposer.
 - 5. Accompany requests after the award of contract with complete documentation of cost (whether cost will increase, decrease, or remain the same) as specified in Section 01 2000 under "Substantiation of Proposed Contract Modifications".
 - 6. The Architect will notify Contractor in writing of decision to accept or reject request.
- E. A request for substitution constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.

3.02 OWNER-SUPPLIED PRODUCTS

- A. Owner's Responsibilities:
 - 1. Arrange for and deliver Owner reviewed shop drawings, product data, and samples, to Contractor.
 - 2. Arrange and pay for product delivery to site.
 - 3. On delivery, inspect products jointly with Contractor.
 - 4. Submit claims for transportation damage and replace damaged, defective, or deficient items.
 - 5. Arrange for manufacturers' warranties, inspections, and service.
- B. Contractor's Responsibilities:
 - 1. Review Owner reviewed shop drawings, product data, and samples.
 - 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner.
 - 3. Handle, store, install and finish products.
 - 4. Repair or replace items damaged after receipt.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- G. Prevent contact with material that may cause corrosion, discoloration, or staining.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 6201
PRE-BID SUBSTITUTION REQUEST

TO: LORD, AECK & SARGENT, INC.,

SUBSTITUTION OF THE FOLLOWING IS HEREBY REQUESTED IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS, THE GENERAL CONDITIONS OF THE CONTRACT, AND SECTION 01 6000.

Specified product:

Section No.: Page No.: Para. No.:

Proposed product information:

CHECK ONE:

- The proposed product complies with the contract documents in every respect.
- The proposed product complies with the contract documents in every respect except for the specified manufacturer name or brand name or model number.
- The proposed product material complies with the contract documents in every respect except for deviations which are as follows:

CHECK ONE:

- No changes are required in other work or products if the substitute product is approved.
- Changes will be required in other work or products if the substitute product is approved, as follows:

MAINTENANCE SERVICES AND REPLACEMENT MATERIAL AVAILABILITY (IF APPLICABLE):

TO THE OWNER, TO THE ARCHITECT, TO OTHER BIDDERS AND SUB-BIDDERS (OF ANY TIER), AND TO THE CONTRACTOR(S) AND SUBCONTRACTORS AND SUPPLIERS (OF ANY TIER) TO WHOM CONTRACTS ARE EVENTUALLY AWARDED IN CONNECTION WITH THE PROJECT, THE UNDERSIGNED WARRANTS THAT THE UNDERSIGNED:

- has examined the bidding documents for the project,
- has investigated the proposed product and has found it to be equal or superior in all significant respects to the specified product,
- will provide the same warranty for the proposed product as for the specified product,
- will coordinate the installation and make other changes which may be required for the work to be complete in all respects, including, redesign, additional components, and additional capacity required by other work affected by the change, and
- waives all claims for additional costs and time extensions which subsequently may be come apparent and which are caused by the change.

COMPLETE PRODUCT DATA, AS SPECIFIED IN THE CONTRACT DOCUMENTS, IS ENCLOSED WITH THIS REQUEST.

THIS REQUEST IS SUBMITTED IN THE NAME OF:

Thomas County Historic Courthouse

01 6201 - 2
PRE-BID SUBSTITUTION REQUEST

Company name:

By:

Date:

END OF SECTION

SECTION 01 6202
POST-BID SUBSTITUTION REQUEST

TO: LORD, AECK & SARGENT, INC.,

SUBSTITUTION OF THE FOLLOWING IS HEREBY REQUESTED IN ACCORDANCE WITH THE INSTRUCTIONS TO BIDDERS, THE GENERAL CONDITIONS OF THE CONTRACT, AND SECTION 01 6000.

SPECIFIED PRODUCT:

SECTION NO.:

PAGE NO.:

PARA. NO.:

REASON FOR REQUESTING SUBSTITUTION:

PROPOSED PRODUCT INFORMATION:

CHECK ONE:

- The proposed product complies with the contract documents in every respect.
- The proposed product complies with the contract documents in every respect except for the specified manufacturer name or brand name or model number.
- The proposed product material complies with the contract documents in every respect except for deviations which are as follows:

CHECK ONE:

- No changes are required in other work or products if the substitute product is approved.
- Changes will be required in other work or products, if the substitute product is approved, as follows:

MAINTENANCE SERVICES AND REPLACEMENT MATERIAL AVAILABILITY (IF APPLICABLE):

CHECK ONE:

- No change in the Contract Sum is required.
- Modification of the Contract Sum by adding \$ _____ is hereby requested.
- Modification of the Contract Sum by subtracting \$ _____ is hereby requested.

CHECK ONE:

- No change in the Contract Time is required.
- Modification of the Contract Time by adding _____ calendar days is hereby requested.
- Modification of the Contract Time by subtracting _____ calendar days is hereby requested.

TO THE OWNER, TO THE ARCHITECT, AND TO OTHER CONTRACTORS AND THEIR SUBCONTRACTORS (IF ANY), THE UNDERSIGNED WARRANTS THAT THE UNDERSIGNED:

- has examined the Contract Documents for the project,
- has investigated the proposed product and has found it to be equal or superior in all significant respects to the specified product,
- will provide the same warranty for the proposed product as for the specified product,
- will coordinate the installation and make other changes which may be required for the work to be complete in all respects, including, redesign, additional components, and additional capacity required by other work affected by the change, and
- waives all claims for additional costs and time extensions which subsequently may be come apparent and which are caused by the change.

Substantiation of the cost of the proposed change is enclosed with this request, in the form required by Section 01 2000.

Complete product data, as specified in the Contract Documents, is enclosed with this request.

THIS REQUEST IS SUBMITTED IN THE NAME OF:

Company name:

BY:

Date:

END OF SECTION

SECTION 01 7000
EXECUTION REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of Owner personnel.

1.02 PROJECT CONDITIONS

- A. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment.
- B. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- C. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.
- D. Rodent and Pest Control: Provide methods, means, and facilities to prevent rodents and pests and insects from accessing or invading premises.
- E. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

1.03 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work which are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 PREINSTALLATION MEETINGS

- A. Notify Architect sufficiently in advance of meeting date to allow for coordination with Architect's schedule.
- B. Prepare agenda and preside at meeting:
 - 1. Review conditions of examination, preparation and installation procedures.
 - 2. Review coordination with related work.
- C. Record minutes and distribute copies within two days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 ALTERATIONS

- A. Drawings showing existing construction and utilities are not record documents or precise surveys of actual conditions.
 - 1. Verify that construction and utility arrangements are as shown.
 - 2. Report discrepancies to Architect before disturbing existing installation.
 - 3. Beginning of alterations work constitutes acceptance of existing conditions.

- B. Separate areas in which alterations are being conducted from other areas that are still occupied; provide, erect, and maintain temporary dustproof partitions of construction.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
 - 1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 - 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- D. Remove existing work as indicated and as required to accomplish new work.
 - 1. Remove items indicated on drawings.
 - 2. Relocate items indicated on drawings.
 - 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 - 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
 - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 - 4. Verify that abandoned services serve only abandoned facilities.
 - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- F. Protect existing work to remain.
 - 1. Prevent movement of structure; provide shoring and bracing if necessary.
 - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch as specified for patching new work.
- G. Adapt existing work to fit new work.
- H. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect.
- I. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.

- J. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
- K. Refinish existing surfaces as indicated:
 - 1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
 - 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
 - 3. Patch as specified for patching new work.
- L. Clean existing systems and equipment.
- M. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- N. Do not begin new construction in alterations areas before demolition is complete.

3.06 CUTTING AND PATCHING

- A. Execute cutting and patching including excavation and fill to complete the work, to uncover work in order to install improperly sequenced work, to remove and replace defective or non-conforming work, to remove samples of installed work for testing, to provide openings in the work for penetration of mechanical and electrical work, to execute patching to complement adjacent work, and to fit products together to integrate with other work.
- B. Execute work by methods to avoid damage to other work, and which will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- C. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- D. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- E. Restore work with new products in accordance with requirements of Contract Documents.
- F. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- G. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.
- H. Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
- I. Make neat transitions. Patch work to match adjacent work in texture and appearance. Where new work abuts or aligns with existing, perform a smooth and even transition.
- J. Patch or replace surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. Repair substrate prior to patching finish. Finish patches to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections.

3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.09 STARTING SYSTEMS

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

3.10 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate to Owner's personnel the start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at agreed time, at equipment location.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season near the onset of the other season.
- C. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of owner personnel.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- E. Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instruction.

3.11 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.12 FINAL CLEANING

- A. Clean areas to be occupied by Owner prior to final completion before Owner occupancy.
- B. Use cleaning materials that are nonhazardous.

- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces, dust and mop hard flooring.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean permanent washable filters and replace disposable filters of operating equipment.
- F. Clean debris from roofs, gutters, downspouts, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

END OF SECTION

SECTION 09 0210
PLASTER REPAIR AND CONSERVATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Gypsum plaster: Flat, ornamental run-in-place and ornamental mold cast plaster.
 - 1. Conservation and repair of existing plaster.
 - 2. Removal and replacement of damaged or deteriorated existing plaster.

1.02 REFERENCE STANDARDS

- A. ASTM C 28/C 28M - Standard Specification for Gypsum Plasters; 2000 (Reapproved 2005).
- B. ASTM C 35 - Standard Specification for Inorganic Aggregates for Use in Gypsum Plaster; 2001 (Reapproved 2005).
- C. ASTM C 61/C 61M - Standard Specification for Gypsum Keene's Cement; 2000 (Reapproved 2006).
- D. ASTM C 631 - Standard Specification for Bonding Compounds for Interior Gypsum Plastering; 1995a (reapproved 2000).
- E. ASTM C 842 - Standard Specification for Application of Interior Gypsum Plaster; 2005.
- F. ASTM C 59-95 -- Standard Specification for Gypsum Casting and Molding Plaster

1.03 SUBMITTALS

- A. Product Data: Provide data on plaster materials, characteristics, and limitations of products specified.
- B. Submit proposed plaster mixes for flat plaster work.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum six years of experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original and unopened packaging, with brand names and manufacturer's labels intact and legible.
- B. Store materials in dry location, fully protected from weather and direct exposure to sunlight.
- C. Handle cast plaster units in manner consistent with their shape and strength to prevent damage.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Gypsum Plaster:
 - 1. National Gypsum Company: www.nationalgypsum.com.
 - 2. USG: www.usg.com.
 - 3. Substitutions: See Section 01600 - Product requirements.

2.02 PLASTER MATERIALS

- A. Base Coat Materials:
 - 1. Gypsum neat plaster, fibered: ASTM C 28.
 - 2. Sand: ASTM C35, for base coat plaster.
- B. Finish Coat Plaster Materials:
 - 1. Gypsum gaging plaster: ASTM C 28.

2.03 MISCELLANEOUS MATERIALS

- A. General: Provide miscellaneous materials as produced or recommended by plaster manufacturer.
- B. Bonding compounds and surface hardeners:
 - 1. Provide products complying with requirements of the contract documents and made by one of the following:
 - a. Larsen Products Corp.
 - 2. Surface Applied Bonding Compound; Polyvinyl Acetate Homopolymer; Weld Crete by Larsen Products Corp.
 - 3. Surface Hardener; Acrylic Admix 101 by Larsen Products Corp.
- C. Joint compound:
 - 1. Gypsum based joint compound with vinyl adhesive additive; Durabond by USG Corporation.
- D. Consolidant:
 - 1. The consolidant shall be a water-borne acrylic solution using NEO-CRYL BT-520 by Zeneca Resins of Wilmington, MA. The formula will be developed on site but will contain NEO-CRYL BT-520, isopropyl alcohol, water and ammonium hydroxide.

2.04 PLASTER MIXES

- A. General: Measure proportions accurately by volume. Use of shovels for measuring is not allowed. Mix plaster using mechanical mixers unless hand mixing is specifically approved by the Architect.
- B. Gypsum Plaster: Comply with ASTM C 842 for proportions for each substrate and finish type required.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing conditions are satisfactory before starting work.
- B. Grounds and Blocking: Verify items within walls for other sections of work have been installed.

3.02 PLASTER REPAIR TECHNIQUES

- A. Removal and replacement of existing patches and repair of existing depressions, cracks and minor damage.
 - 1. Remove all existing plaster patches which are unstable or are not smooth or level with adjacent plaster.
 - a. Remove patched areas by scraping patch material out. Avoid damage to existing adjacent plaster.
 - b. If the patch did not extend through the full depth of the existing plaster to the substrate, apply a coat of surface hardener Admix A101 to the remaining plaster.
 - c. Apply one coat of surface applied bonding compound over the hardened remaining surface and at the full perimeter of the area to be plastered on the edge of the adjacent plaster to remain.
 - d. Fill all removed patches with gypsum plaster, making infilled areas smooth and level with adjacent surfaces.
 - 2. Fill all existing depressions, cracks or minor damage, 1/16 inch deep or greater, with gypsum plaster..
 - a. Remove existing damaged plaster back to a point at which sound material is reached.
 - b. Clean plaster surface adjacent to damaged area. Remove loose and foreign matter that could impair adhesion.

- c. Apply a coat of surface hardener Admix A101 to the remaining plaster.
 - d. Apply one coat of surface applied bonding compound over the hardened existing surface and at the full perimeter of the area, on the edge of the adjacent plaster to remain.
 - e. Fill all voids with gypsum molding plaster, making infilled areas smooth and level with adjacent surfaces.
 3. Fill all existing depressions, 1/16 inch deep or less (minor depressions and imperfections in the painted surface which require feathering to adjacent surfaces), with gypsum plaster.
 - a. Clean plaster surface adjacent to depression.
 - b. Apply joint compound and feather to bring smooth and level with adjacent surfaces.
- B. Flat plaster: Selective removal and replacement of only the plaster finish coat within an area.
 1. Remove the finish coat which is debonded from the base coats. The rest of the finish coat is to remain. All of the base coat is to remain.
 2. Clean the surface. Remove loose and foreign matter that could impair adhesion.
 3. Scratch remaining plaster to increase key to new plaster.
 4. Apply a coat of surface hardener Admix A101 to the remaining plaster.
 5. Apply one coat of surface applied bonding compound over the hardened remaining surface and at the full perimeter of the area to be plastered on the edge of the adjacent plaster to remain.
 6. Install a new finish coat as described in gypsum plaster. The surface of the new finish coat shall be flush with and shall match the texture of the adjacent existing plaster that remains.
- C. Consolidation.
 1. Deteriorated plaster consists of weak, friable and "sugary" surfaces incapable of providing proper support for painted decoration or plaster patches and skim coats.
 2. Treat the plaster with an application of consolidants. The treatment shall restore the plaster to its original physical integrity or, at a minimum, to a condition of sufficient cohesion to permanently support itself and any painted decoration.
 3. The materials and techniques of consolidation shall be selected by the Trade Contractor and approved by the Architect. The consolidation treatment shall not cause damage to existing substrates, surrounding materials or decorative painting to remain and be conserved. The plaster consolidation treatment shall not adversely affect or interfere with the conservation of superimposed paint layers.
 4. Apply consolidant over surfaces which have been perforated to allow for absorption.
 - a. Size and placement of perforations will be determined through testing prior to complete treatment, the goal being to use as few perforations as possible.
 5. Apply consolidant as a compression cotton batting, secured by plastic sheeting, and manipulated periodically to force the solution through the perforations.
 - a. Actual dwell time and manipulation process to be determined by testing prior to complete treatment.
 6. Following treatment rinse surface with an ammonia and water solution.
- D. Selective trenching or removal and replacement of plaster.
 1. Sawcut the perimeter of the areas indicated to be removed.
 2. Remove plaster within the area bounded by the sawcut. The removal shall be full depth to the substrate.
 3. Exercise care to not damage the decorative elements.
 4. Install metal lath over the masonry substrate. No lath will be required for trenching and patching that is less than 12 inches wide.

5. Apply bonding compound at the full perimeter of the area to be plastered on the edge of the adjacent plaster to remain and to the surface of the masonry substrate.
6. Install gypsum plaster. The surface of the new finish coat shall be flush with and shall match the texture of the adjacent existing plaster that remains.

3.03 PLASTER APPLICATION - GENERAL

- A. General: Comply with gypsum plaster manufacturer's recommendations and provisions of ASTM C 842.
 1. Coordinate plaster application with installation of adjacent work to avoid soiling and damage of plaster and other work.
- B. Tolerances:
 1. Deviation from plane not to exceed 1/8 inch in 10 feet as measured with a straightedge at any location on surface unless this requirement conflicts with meeting the requirement of the following paragraph.
 - a. New plaster application shall align with limits of the old plaster which has been removed. Note the visible evidence of limits of old plaster around the perimeter of each area and work the finish surface of the new plaster around the perimeter of each area to this mark. New plaster shall generally follow the contour of the existing plaster that was removed.

3.04 ADJUSTING

- A. Corrections: Cut out and replace defective areas of new work so that repairs match acceptable work in all respects. Defective work includes, but is not limited to, areas showing cracks, dents, crazing, blisters, and other surface imperfections, as well as areas where bond to substrate has failed.

3.05 CLEANING

- A. Removal: Remove and discard temporary protection after plaster work in each area has been completed. Carefully remove plaster from other exposed surfaces, leaving them in undamaged condition; dispose of packaging materials and plaster debris.

3.06 PROTECTION

- A. Protect all existing materials from damage or soiling.

3.07 TESTING

- A. After 28 days perform quality control testing on select areas of the new plaster.

END OF SECTION

SECTION 09 2400
PORTLAND CEMENT PLASTERING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Portland cement plaster for installation over exterior masonry, concrete, and solid surfaces.

1.02 REFERENCE STANDARDS

- A. ASTM C 150 - Standard Specification for Portland Cement; 2007.
- B. ASTM C 206 - Standard Specification for Finishing Hydrated Lime; 2003.
- C. ASTM C 926 - Standard Specification for Application of Portland Cement-Based Plaster; 2006.

1.03 SUBMITTALS

- A. Existing Stucco Composition Testing: Provide results from sample testing of existing exterior stucco. Test results are to include both petrographic examination and chemical analysis including component recommendations for new stucco matching the existing.
 - 1. Samples for testing are to be taken from both the Main Courthouse and the Annex.
- B. Existing Stucco Condition Report: Sound stucco on entire Main Courthouse and Annex to verify adhesion to the substrate. Identify deteriorated and delaminated stucco in report documenting findings on elevation drawings and on the building facades.
- C. Product Data: Provide data on plaster materials, characteristics and limitations of products specified.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum five years of experience.

1.05 MOCK-UP

- A. Construct mock-up of exterior wall, 3 feet long by 3 feet wide, illustrating surface finish.
- B. Locate where directed.
- C. Mock-up may remain as part of the Work.

1.06 FIELD CONDITIONS

- A. Maintain minimum ambient temperature of 50 degrees F during installation of plaster and until cured.

PART 2 PRODUCTS

2.01 PLASTER MATERIALS

- A. Portland Cement, Aggregates, and Other Materials: In accordance with ASTM C 926, except as indicated below:
- B. Portland Cement: ASTM C 150, Type I.
- C. Masonry Cement: Not permitted.
- D. Lime: ASTM C 206, Type S.
- E. Aggregate: Natural sand, within the following sieve sizes and percentage retained limits:
- F. Water: Clean, fresh, potable and free of mineral or organic matter that could adversely affect plaster.
- G. Plaster Mix Reinforcement: Glass fibers, chopped to 1/2 inch nominal length, alkali resistant.

2.02 PLASTER MIXES

- A. Over Solid Bases: Three-coat application, mixed and proportioned in accordance with ASTM C 926.
- B. First Coat Proportions of new first coat is to be based on results of existing stucco testing.
- C. Second Coat: Proportions of new second coat is to be based on results of existing stucco testing.
- D. Finish Coat: Proportions of new finish coat is to be based on results of existing stucco testing.
- E. Mix only as much plaster as can be used prior to initial set.
- F. Mix materials dry, to uniform color and consistency, before adding water.
- G. Protect mixtures from freezing, frost, contamination, and excessive evaporation.
- H. Do not retemper mixes after initial set has occurred.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify the suitability of existing conditions before starting work.
- B. Masonry: Verify joints are cut flush and surface is ready to receive work of this section. Verify no bituminous or water repellent coatings exist on masonry surface.

3.02 PREPARATION

- A. Dampen masonry surfaces to reduce excessive suction.
- B. Clean concrete surfaces of foreign matter. Clean surfaces using acid solutions, solvents, or detergents. Wash surfaces with clean water.
- C. Roughen smooth concrete surfaces and apply bonding agent in accordance with manufacturer's instructions.
- D. Protect adjacent surfaces from soiling and damage.

3.03 PLASTERING

- A. Apply plaster in accordance with ASTM C 926.
- B. Moist cure base coats.
- C. Apply second coat immediately following initial set of first coat.
- D. After curing, dampen previous coat prior to applying finish coat.
- E. Finish Texture: Match existing adjacent finish texture.
- F. Avoid excessive working of surface. Delay troweling as long as possible to avoid drawing excess fines to surface.
- G. Moist cure finish coat for minimum period of 48 hours.

3.04 CLEANING

- A. Remove and discard temporary protection after plaster work in each area has been completed. Carefully remove plaster from other exposed surfaces, leaving them in undamaged condition; dispose of packaging materials and stucco debris.

END OF SECTION