THE HOUSING AUTHORITY OF THE CITY OF LAKELAND

430 HARTSELL AVENUE

LAKELAND, FLORIDA 33815

COMM. NO. 13-080

ARCHITECTURAL SPECIFICATIONS

PROJECT MANUAL

SET NO._____

DATE: JUNE 7, 2013

ROBERT REID WEDDING ARCHITECTS AND PLANNERS, A.I.A., INC.
4112 CYPRESS STREET
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DIVISION 1 - GENERAL REQUIREMENTS

SECTION 011100

SUMMARY OF WORK

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.02 SUMMARY

A. Section Includes:

1. Description of Work

2. Definitions

3. Work covered by Contract Documents

4. Contracts

5. Owner Furnished Products

6. Owner Provided Work

B. Provide all labor, materials, plant facilities and skills necessary to complete the work under this Contract. The Project includes, but is not limited to, construction and related work as indicated on the Drawings and described in the Specifications, as herein enumerated.

SPECIFICATIONS:

DIVISION 01	GENERAL REQUIREMENTS
DIVISION 02	EXISTING CONDITIONS
DIVISION 06	WOOD, PLASTICS AND COMPOSITES
DIVISION 07	THERMAL AND MOISTURE PROTECTION
DIVISION 08	OPENINGS
DIVISION 09	FINISHES
DIVISION 10	SPECIALTIES
DIVISION 12	FURNISHINGS
DIVISION 22	PLUMBING
DIVISION 26	ELECTRICAL

DRAWINGS:

G-1 COVER SHEET, SITE PLAN/KEY PLAN, LIFE SAFETY PLAN, LEGEND AND SYMBOLS

ARCHITECTURAL:

A-1 TYPICAL UNIT: DEMOLITION PLAN, FLOOR PLAN AND INTERIOR ELEVATIONS
A-2 ACCESSIBLE UNIT: DEMOLITION PLAN, FLOOR PLAN AND INTERIOR ELEVATIONS
A-3 CASEWORK, DETAILS, DOOR & FINISH SCHEDULES

MECHANICAL:

M-1 MECHANICAL PLANS

PLUMBING:

P-1 PLUMBING PLANS

1.03 WORK COVERED BY CONTRACT DOCUMENTS

A. The work of this Project is shown on the Drawings and described in the various Sections of the Specification,

B. The Drawings and Specifications are complementary and what is required by any one shall be as binding as if required by all.

C. The Project consists of the following:

1. Work of this Contract comprises the interior improvements of an existing facility in Lakeland, Florida, as indicated on the drawings.

1.04 DEFINITIONS

A. Furnish: Purchase and deliver to project site, ready for installation.

B. Install: Unpack, assemble, set in final position, fasten in place, make final connections, clean, adjust, and leave ready for use.

C. Provide: Furnish and install.

D. Receive: Accepting a delivery.

E. Final Connections: Complete plumbing, mechanical, and electrical connections as required and recommended by manufacturer for optimum operation of equipment.

F. Drawings Use of: Do not scale the Drawings. If the Contractor chooses to calculate measurements by scaling the Drawings, it is at their own risk and is not considered to be an accurate measurement. The Contractor is responsible for the accuracy of measurements, elevations, lines, and grades of the Work.

1.05 QUALITY ASSURANCE

A. It is the intent of the Owner and the Project Manual to conform to the AMERICANS WITH DISABILITIES ACT OF 1991.

1.06 CONTRACTOR USE OF PREMISES

A. General: Contractors shall limit their use of the premises to construction activities in areas indicated.

1. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.

2. Keep driveways and entrances serving the premises clear and available to the Owner at all times. Do not use these areas for parking or storage of materials, Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

B. Contractor shall assume full responsibility for protection and safe keeping of products under this Specification.

1.07 BIDDING CLASSIFICATION

A. This Project shall be performed under the following Prime Contracts:

1. General Contract

1.08 WORK COVERED BY CONTRACT DOCUMENTS

A. Work of this Contract comprises the interior improvements of an existing facility in Lakeland, Florida, as indicated on the drawings.

B. The Work includes, but is not limited to architectural, plumbing and electrical systems.

1.09 STANDARD FORM OF CONTRACT BETWEEN OWNER AND CONTRACTOR

A. Contract Description: Construct the Work under the Contract as furnished by Architect.

1.10 ARCHITECT

A. Architect’s Responsibilities:

1. Arrange for and deliver reviewed Shop Drawings, Product Data, and Samples, to Contractor.

2. Inspect work completed and report to Contractor.

B. Contractor's Responsibilities:

1. Review provided Shop Drawings, Product Data, and Samples.

2. Coordinate scheduling and products at site; inspect for completeness or damage. Notify Contractor and Owner of incomplete and damaged shipments.

3. Inspect work at all phases of the job.

4. Project Close-out and Punch List.

1.11 OWNER PROVIDED WORK

A. Owner's Responsibilities:

1. Arrange for Owner provided equipment requested by Contractor.

2. Coordinate scheduling delivery of Owner provided materials.

3. Inspect work completed and report to Architect and Contractor.

PART 2 – PRODUCTS - Not Used

PART 3 – EXECUTION - Not Used

- END OF SECTION -

SECTION 012600

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.02 SUMMARY

A. Section Includes:

1. Contract Modification Procedures:

a. Submittals
b. Documentation of Change in Contract Sum and Contract Time

2. Contract Modification Pricing Guidelines

3. Requests for Information and Supplemental Instructions

4. Change of Contract Procedures

5. Construction Change Directive

6. Change of Contract:

a. Stipulated price change order
b. Unit price change order
c. Time and material change order
d. Execution of Change of Contract written orders

7. Correlation of Contractor Submittals

B. Related Sections:

1. Agreement: Monetary values of established unit prices and percentage allowances for Contractor's overhead and profit.

2. General Conditions, Article 19: Governing requirements for changes in the Work, in Contract Sum and Contract Time.

3. Section 013300 - Submittals: Construction Progress Schedules and miscellaneous submittals.

4. Section 016000 - Material and Equipment: Product options and substitutions.

5. Section 017700 - Contract Closeout: Project Record Documents.

1.03 SUBMITTALS

A. Submit name of the individual authorized to receive change documents, and be responsible for informing others in Contractor's employ and Subcontractors of changes to the Work.

B. Change of Contract Forms: Furnished by the Architect.

1.04 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

A. Maintain detailed records of work performed on a time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.

B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.

C. On request, provide additional data to support computations:

1. Quantities of products, labor, and equipment.

2. Taxes, insurance, and bonds.

3. Overhead and profit.

4. Justification for change in Contract Time.

5. Credit for deletions from Contract, similarly documented.

D. Support each claim for additional costs, and for work done, with additional information:

1. Origin and date of claim.

2. Dates and times work was performed, and by whom.

3. Time records and wage rates paid.

4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.05 CONTRACT MODIFICATION PRICING GUIDELINES

A. For each change, the Contractor shall furnish a detailed, written proposal itemized according to General Conditions, Article 19.

1.06 REQUESTS FOR INFORMATION AND SUPPLEMENTAL INSTRUCTIONS

A. Definition: Requests for Information (RFI), is a formal process used during bidding and during construction to facilitate communication between the Contractor and the Architect with regard to requests for information and clarification of the intent of the Contract Documents.

1. Request for Information form may be used during bidding phase. Refer to Invitation to Bid and Instructions to Bidders.

B. Procedure:

1. Conditions Requiring Clarification of the Contract Documents: Submit a Request for Information to the Architect,

a. Submit Requests for Information from Contractor's office or field office only. Requests for Information submitted directly from subcontractors or suppliers will not be accepted.
b. Generate Requests for Information by one source per project and number accordingly.
c. Submit one request for information per form.

2. The Architect will review formal requests from the Contractor with reasonable promptness and the Contractor will be notified in writing of decisions made, via the RFI form.

a. The Architect's response shall not be considered as a Change Order or Change Directive, nor does it authorize changes in the Contract Sum or Contract Time.

3. Maintain log of Requests for Information sent to, and responses from the Architect.

4. Scheduling, Costing, and Owner Furnished Products/Work Coordination: Direct to the Owner's Representative.

C. RFI Form: Submit requests for information on attached Request for Information form, attached at end of this Section. The Architect will not respond to requests for information unless this format is utilized.

1. Where submittal form does not provide space needed for complete information, additional sheets may be attached.

1.07 CHANGE PROCEDURES

A. The Architect will advise of minor changes in the Work not involving an adjustment to Contract Sum or Contract Time as authorized by the Owner/Architect Agreement, and by issuing supplemental instructions on RFI form attached.

B. The Architect may issue a Proposal Request, Notice of Change, which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications. Contractor will prepare and submit an estimate within 10 days.

C. The Contractor may propose a change by submitting a request for change to the Owner's Representative, 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 requested substitutions in accordance with Section 013300.

1.09 CORRELATION OF CONTRACTOR SUBMITTALS

A. Promptly revise Schedule of Values and Application for Payment forms to record each authorized Change of Contract as a separate line item and adjust the Contract Sum.

B. 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.

C. Promptly enter changes in Project Record Documents.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

- END OF SECTION -

SECTION 013000

ADMINISTRATIVE REQUIREMENTS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.02 SUMMARY

A. Project administrative requirements as specified herein, including the following attachments to this Section:

1. Pre-Construction Conference Agenda.

a. Lakeland Housing Authority requirements.

2. Project Requirements Outline:

a. Preconstruction submittals.
b. Requirements during construction.
c. Applications for payment.
d. Project closeout.
e. Special Subcontractor notes.

3. Waivers and Release of Lien upon Progress Payment.

4. Waivers and Release of Lien upon Final Payment.

1.03 PRE-CONSTRUCTION CONFERENCE

A. Before beginning work at the Project site, arrange for a pre-construction conference with the Contractor's superintendent employed for this Project and representatives of electrical and mechanical subcontractors, City of Lakeland representative and the Architect. At this conference this time, the Architect and Lakeland will distribute all the pre-construction conference agenda (see Attachment No. 1 for the Architect's requirements) to all parties concerned and will discuss the Project under Contract and prepare a program of procedure in keeping with requirements of the Drawings and Specifications. Superintendent shall make every effort to expeditiously coordinate all phases of the work, including required reporting procedure, to obtain the end result within the full purpose and intent of the Project Drawings and Specifications.

1.04 PROJECT PROGRESS SCHEDULE AND PROJECT MEETINGS

A. The Contractor shall prepare and maintain an overall project progress schedule in a bar chart format fashion with an entry for every major trade, or subtrade. The chart shall indicate the date on which work will commence for every trade and indicate when such work will be complete. Update chart monthly.

B. Also indicate the date on which the Project will be substantially complete and the date of final Project completion.

C. Provide the Architect and Owner with two copies of the names and addresses (with phone numbers) of all subcontractors employed on the Project.

D. Contractor and Contractor's representative to attend a Project meeting to be held at the Project site once a month or when the Owner's representative feels it's required to coordinate the activities of construction, and review the progress of the project. The request for payment shall be available at the monthly meeting.

E. Present any request for change orders at the monthly meeting along with the substantiation for that change. Requests for change orders will only be processed in the month they occur. Any request for a change order that also generates a need for time extension to Project must so state. Change orders will be attached to the pay request in the month in which they occur. Change order requests that do not don't specifically request project time extensions are assumed to require no additional contract days.

F. The Contractor shall meet all requirements from the City of Lakeland Housing Authority.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

ATTACHMENT NO. 1

PRE-CONSTRUCTION CONFERENCE AGENDA

ROBERT REID WEDDING ARCHITECTS & PLANNERS, AIA, INC.
4112 WEST CYPRESS STREET
TAMPA, FLORIDA 33607

PROJECT NAME: _____

LOCATION: _____

OWNER NAME: _____

ADDRESS: _____

CONTRACTOR NAME: _____

ADDRESS: _____

PROJECT MANAGER: _____

SUPERINTENDENT: _____

REVIEW AND VERIFY THE FOLLOWING

1. Phone Numbers for the following:

Contractor:	ph. ( ) _____	Contact: _____
	fax ( ) _____	
Job Office:	ph. ( ) _____	Contact: _____
	fax ( ) _____	
Architect:	ph. (813) 879-6996	Contact: _____
	fax (813) 871-5203	
Owner:	ph. ( ) _____	Contact: _____
	fax ( ) _____	

2. Review Contract Drawings Yes ____ No ____
   Review Specifications Yes ____ No ____
   Review Addenda Yes ____ No ____

3. Have bonds and insurance certificates been filed:
   For Owner: Yes ____ No ____
   For Contractor: Yes ____ No ____

4. Schedule of Values received from Contractor: Yes ____ No ____

5. List of Subcontractors received: Yes ____ No ____

6. Progress Schedule received: Yes ____ No ____

7. Review "Project Requirements Outline": Yes ____ No ____

8. Review Contractor’s and Subcontractors questions concerning Drawings, Specifications and other Project requirements.

9. Advise Contractor of Asbestos Report (if required): Yes ____ No ____

10. Review the City of Lakeland Housing Authority requirements: Yes ____ No ____

ATTACHMENT NO. 2

PROJECT REQUIREMENTS OUTLINE

1.0 PRE-CONSTRUCTION SUBMITTALS

A. Submit the following to Field Architect at the Pre-construction Conference Meeting or immediately thereafter.

1. Copy of contract.

2. Progress schedule.

3. City of Lakeland Housing Authority requirements.

4. Schedule of values.

5. List of subcontractors and major material suppliers.

2.0 REQUIREMENTS DURING CONSTRUCTION

A. Changes in the work:

1. Authorized by the Architect and shall be in writing.

a. "Change Order" - Costs known and agreed.
b. Change Directive - Critical! Costs unknown but parties agree to later cost negotiations.
c. Field Order - Comply! No costs are involved or if costs are involved and are major, submit costs immediately for preparation of Change Order or Directive.
d. Telephone Directives or changes will be verified in writing.

B. Shop Drawings and Submittals:

1. Submit early for approval.

2. Be aware of long lead items.

3. Late submission not grounds for extensions.

4. Maintain copies of all submissions on Project site.

5. Approval by Contractor prior to submission to Architect is required. (If not, submittals will be returned unchecked).

6. Shop drawings submitted shall be one reproducible drawing and five prints. Reproducible drawing will be returned with appropriate markings.

C. Substitutions after contract award are generally not acceptable, but if necessary:

1. Shall be submitted early allowing time for review.

2. Proof of equality is Contractor's responsibility.

3. Architect's decision shall be final.

D. Marked drawings shall be kept current for later preparation of "As-Built Drawings."

E. Permit Documents (Drawings, Specifications, and Certificates):

1. Shall not be used for construction.

2. Shall be protected on site for inspectors reference

3. Shall not be marked except by inspectors.

F. Changes in Subcontractors or major suppliers following contract award are not allowed without concurrence of Architect in writing.

G. Contractor's supervisory personnel shall not be changed during the execution of the work of this project without previous arrangement with, and/or concurrence of the Architect.

H. Periodic progress meetings will be held regularly by Contractor.

I. Requests for time extensions due to inclement weather or other conditions shall be presented the month of occurrence in writing with supporting evidence.

J. Building and site shall be maintained in a clean and safe condition.

K. Copies of all test results (if required) shall be distributed as follows: sent to the proper people.

1. All testing: Architect, Contractor and Owner.

3.0 APPLICATIONS FOR PAYMENT

A. Form: AIA Form No. G702 must be used. Computer printout in identical format is acceptable.

B. Submittals:

1. Application for Payment:

   a. 4 copies with original signatures, seals and notarization (3 copies to be sent to Architect's Office and 1 copy to job site).
   b. To whom and where as directed.

2. List of Notices to Owner:

   a. All parties issuing notices.
   b. Up to date monthly.

3. Partial and Final Releases of Lien:

   a. Attached sample affidavit and partial and full release of lien in this section.
   b. Submit with Application for Payment. Submit original release and one copy for each.
   c. Supporting payment of preceding application.
   d. Shall contain amount paid and date to which lien rights are released.
   e. Shall be notarized.
   f. Line item number shall appear at the top of each lien release for identification.
   g. Release dates shall be current.
   h. Compliance required for approval of Application for Payment.

C. Stored Materials:

1. Definition: Any material not yet incorporated into work.

2. Must be listed under "Stored Materials" column.

3. Must be on site or:

    a. In a bonded warehouse.
    b. In a warehouse and separately insured in the owners name and dedicated to the project, (original insurance certificate must accompany request).
    c. In either case delivery tickets or other proof of delivery must be presented.

4.0 PROJECT CLOSEOUT

A. Substantial Completion:

1. All material and labor complete and functioning.

2. Certificate of Occupancy issued.

3. Building can function as intended.

4. "Punch List" need not be completed.

5. Certificate of Occupancy alone is not tantamount to Substantial Completion.

6. City of Lakeland Housing Authority requirements.

B. Architect’s Punch List:

1. Performed following completion of Contractors Punch List.

2. Following notification of the above.

3. Corrections shall be made promptly.

C. Retainage release - only after:

1. Substantial completion.

2. Completion of "Punch List" corrections.

3. Receiving a complete set of "as-built" drawings drafted by a professional draftsman.

4. Receiving all warranties and guarantees.

5. Receiving all maintenance and instruction documents.

ATTACHMENT NO. 3

INTERIM LIEN WAIVER FORM

WAIVER AND RELEASE OF LIEN UPON PROGRESS PAYMENT

OWNER:

GENERAL CONTRACTOR:

PROJECT NAME:

STATE OF FLORIDA
COUNTY OF

All Lien Waivers shall be in compliance with Florida Statutes Chapter 713 for construction liens for work in the State of Florida.

The undersigned lienor, in consideration of the sum of $, hereby waives and releases its lien and right to claim a lien for labor, services, or materials furnished through to on the job of to the following property:

This waiver and release does not cover any retention or labor, services or materials furnished after the date specified.

ADDITIONAL WARRANTIES AND REPRESENTATIONS

(1) Any and all contractors, subcontractors, laborers, suppliers and materialmen that have provided labor, material or services to the undersigned for use or incorporation into the construction of the improvements to the Property have been paid and satisfied in full, and there are no outstanding claims of any character arising out of, or related to, the undersigned's activities on, or improvements to, the Property. This Waiver shall be considered an Affidavit under Fla. Stat. Section 713.

(2) This Waiver constitutes a representation by the undersigned signatory, for and on behalf of the firm or company listed below, that the payment referenced above, once received, constitutes full and complete payment for all work performed, and all costs or expenses incurred (including, but not limited to, costs for supervision, field office overhead, home office overhead, interest on capital, profit, and general conditions costs) relative to the work or improvements at the Property as of the date of this Waiver except for the payment of retainage. The undersigned hereby specifically waives, quitclaims and releases any claim for damages due to delay, hindrance, interference, acceleration, inefficiencies or extra work, or any other claim of any kind it may have against the Owner, the General Contractor (if this Waiver is signed by a subcontractor or supplier), or any other person or entity with a legal or equitable interest in the Property, as of the date of this Waiver, except as follows:

(3) This Waiver is specifically made for the benefit of the Owner and the Owner's lender, and any other person or entity with a legal or equitable interest in the Property. The amount of money set forth as due and owing in the immediately preceding Waiver dated , 20 , has been received, and is deemed paid in full.

In Witness Whereof, the undersigned signatory, acting for and on behalf of the firm or company listed below and all of its laborers, subcontractors, and suppliers, has placed his hand and seal this day of , 20 .

Sworn to and subscribed
before me this ____ day of
_____, 20__.

_____
Notary Public

(NOTARY SEAL)

My Commission Expires:
_____

FIRM OR COMPANY:

By: _____

Print Name: _____

Its: _____

ATTACHMENT NO. 4

FINAL LIEN WAIVER FORM

WAIVER AND RELEASE OF LIEN UPON FINAL PAYMENT

OWNER:

GENERAL CONTRACTOR:

PROJECT NAME:

STATE OF FLORIDA
COUNTY OF

All Lien Waivers shall be in compliance with Florida Statutes Chapter 713 for construction liens for work in the State of Florida.

The undersigned lienor, in consideration of the final payment in the amount of $, hereby waives and releases its lien and right to claim a lien for labor, services, or materials furnished to on the job of to the following described property:

ADDITIONAL WARRANTIES AND REPRESENTATIONS

(1) Any and all contractors, subcontractors, laborers, suppliers and materialmen that have provided labor, material or services to the undersigned for use or incorporation into the construction of the improvements to the Property have been paid and satisfied in full, and there are no outstanding claims of any character arising out of, or related to, undersigned's activities on, or improvements to, the Property. This statement is intended to comply with Fla. Stat. § 713.06(d), and this document should be treated as the Contractor's Final Payment Affidavit under that section. This Waiver is specifically made for the benefit of Owner and the Owner's lender, and any other person or entity with a legal or equitable interest in the Property.

(2) This Waiver constitutes a representation by the undersigned signatory, for and on behalf of the undersigned, that all work to be performed under the job has been fully completed and that the payment referenced above, once received, constitutes full and complete payment for all work performed, and all costs or expenses incurred (including, but not limited to, costs for supervision, field office overhead, home office overhead, interest on capital, profit, and general conditions costs) relative to the work or improvements at the Property. The undersigned hereby specifically waives, quitclaims and releases any claim for damages due to delay, hindrance, interference, acceleration, inefficiencies or extra work, or any other claim of any kind it may have against the Owner, the General Contractor (if this Waiver is signed by a subcontractor or supplier), or any other person or entity with a legal or equitable interest in the Property, relative to the work or improvements at the Property.

In Witness Whereof, the undersigned signatory, acting for and on behalf of the firm or company listed below and all of its laborers, subcontractors, and suppliers, has placed his hand and seal this day of , 20 .

FIRM OR COMPANY:

By: _____

Print Name: _____

Its: _____

Sworn to and subscribed
Before me this ____ day of
_____, 20__.

_____
Notary Public

(NOTARY SEAL)

My Commission Expires:

_____

- END OF SECTION -

SECTION 013300

SUBMITTALS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Wherever possible throughout the Contract Documents, the minimum acceptable quality of workmanship and materials has been defined either by manufacturer's name and catalog number or reference to recognized industry standards.

2. To ensure that the specified products are furnished and installed in accordance with the design intent, procedures have been established for advance submittal of design data for its review and approval or rejection by the Architect.

3. This Section specifies administrative and procedural requirements for submittals required for performance of the work, including:

a. Contractor's Progress Schedule
b. Shop Drawings, Product Data, and Samples
c. Certificates
d. Manufacturer Installation Instructions

4. Substitution Procedures

5. Manuals

6. Miscellaneous Submittals

B. Related Documents:

1. Contractor's Substitution Request Form

C. Related Sections:

1. Contractual Requirements for Submittals: General Conditions

   a. Two (2) copies of all Submittals, plus number of copies to be returned to Contractor, shall be submitted unless otherwise specified.
   b. Provide additional copies as required for use in Project Record Documents.

2. Section 017700 - Contract Closeout

3. Individual Submittals Required: Pertinent Sections of these Specifications.

1.03 SUBMITTALS

A. Coordination: Coordinate preparation and processing of Submittals with performance of construction activities. Transmit each Submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Refer to General Conditions, Article 16, for additional requirements.

2. Coordinate each Submittal with fabrication, purchasing, testing, delivery, other Submittals and related activities that requires sequential activity.

3. Coordinate transmittal of different types of Submittals for related elements of the work so processing will not be delayed by the need to review Submittals concurrently for coordination.

   a. The Architect reserves the right to withhold action on a Submittal requiring coordination with other Submittals until related Submittals are received.
   b. No extension of Contract Time will be authorized because of failure to transmit Submittals to the Owner's Representative sufficiently in advance of the work to permit processing.

B. Deliver Submittals to the Architect.

C. Submittal Preparation: Place a permanent label or title block on each Submittal for identification. Indicate the name of the entity that prepared each Submittal on the label or title block.

1. Provide a space approximately 10" x 10" on the label or beside the title block on Shop Drawings to record the Contractor's and Architect review and approval markings and the action taken.

2. Include the following information on the label for processing and recording action taken:

a. Project Name
b. Name of the Owner
c. Date
d. Name and Address of Architect
e. Name and Address of Contractor
f. Name and Address of Subcontractor or Vendor
g. Location Where Item is to be used
h. Name of Manufacturer
i. Drawing Number and Detail References, as Appropriate
j. Certification by the Contractor

D. Submittal Transmittal: Package each Submittal appropriately for transmittal and handling. Transmit each Submittal from Contractor to Architect. Submittals received from sources other than the Contractor will be returned without action.

1. Transmit each submittal to the Architect with "AIA Document G810 – Transmittal Letter".

2. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

3. Identify Project, Contractor, Subcontractor or supplier, pertinent drawing and detail number, and specification section number, as appropriate.

4. On the transmittal, record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitations. Include Contractor's certification that information complies with Contract Document requirements.

5. After Architect review of Submittal, revise and resubmit as required, identifying changes made since previous Submittal.

6. When re-submittal is required for any reason, transmit under new letter of transmittal, indicating by reference to a previous Submittal that this is a re-submittal.

    a. Identify on submittal all changes made since previous submission.

7. Distribute copies of reviewed Submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.

8. All Submittals shall bear the stamp of approval of the Contractor submitting same as evidence that he has checked them, or they will be rejected.

    a. Must be signed or initialed certifying that review, 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.

9. Schedule submittals to expedite the Project, and deliver to Architect. Coordinate submission of related items. Instruct parties to promptly report any inability to comply with provisions.

1.04 SUBMITTAL REQUIREMENTS

A. Transmit submittals in such sequence to avoid delay in the Work or work of other contracts, and no later than 45 days following the notice to proceed.

B. Apply Contractor's stamp, signed certifying approval, verification of products, field dimensions and field construction criteria, and coordination of information is in accordance with requirements of the Work and Contract Documents. Partial submittal of related items will be cause for rejection of submittal.

C. Submission of computer printouts for Shop or Setting Drawings will not be accepted for structural work.

D. Submit a minimum of five (5) opaque copies of shop drawings. Coordinate the number of shop drawing sets needed to satisfy Section 017700 “Contract Closeout.”

1.07 ELECTRICAL, LIGHTING AND MECHANICAL SUBMITTALS (IF REQUIRED)

A. The Owner and Architect will not approve the first Pay Application (after 20 calendar days from date of commencement) until they have received the following:

1. Approved electrical (including all devices) shop drawing submittal.

2. Approved lighting fixture shop drawings submittal.

3. Approved H.V.A.C. equipment and controls shop drawing submittal.

4. Written confirmation from the suppliers that the orders for all materials aforementioned have been placed.

5. Written confirmation on date of delivery to the Subcontractors and/or Project site.

B. Failure to present any of these items will result in delay of approval of Contractor's draw request.

1.08 PROGRESS SCHEDULES

A. Submit initial Construction Progress Schedule in duplicate within 15 days after date of Owner-Contractor Contract. Submit in the form required by the General Conditions of the Contract.

B. Revise and resubmit as required.

C. Submit revised schedules with each Application for Payment, identifying changes since previous version.

1.09 SHOP DRAWINGS

A. Present in a clear and thorough manner. Title each drawing with Project name and number; identify each element of drawings by reference to sheet number of Contract Documents and detail, schedule, or room number.

B. Identify field dimensions; show relation to adjacent or critical features or Work or Products.

C. Where Shop Drawings are required, submit newly prepared information drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered Shop Drawings.

D. Shop Drawings shall be drawn at a scale to clearly indicate all of the above conditions and allow for corrections or modifications, which the Architect may wish to make. The Architect shall be the sole judge as to the acceptability of manufacturer's literature and catalog sheets as Shop Drawings.

E. Shop Drawings shall clearly indicate all dimensional data for all parts of the item; types and materials for all connections; finishes; the exact relation of the item to adjacent materials and equipment in the completed structure including clearance, any necessary isolation, and fastening methods and devices; and mechanical and electrical connections.

F. Shop Drawings include fabrication and installation Drawings, setting diagrams, schedules, patterns, templates, and similar Drawings. Include the following information:

1. Dimensions

2. Identification of Products and Materials Included

3. Compliance With Specified Standards

4. Notation of Coordination Requirements

5. Notation of Dimensions Established by Field Measurement

G. Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11", but no larger than 36" x 48".

H. Submit in the form of one reproducible transparency and one opaque reproduction, or three opaque reproductions plus required amount to be returned to Contractor. After review, reproduce and distribute to appropriate parties.

I. Do not permit Shop Drawing copies, without an appropriate final "Action" marking by the Architect, to be used in connection with the work.

J. The Contractors shall be responsible for distribution of additional prints to vendors, etc.

1.10 PRODUCT DATA

A. Submit only pages that are pertinent; mark each copy of standard printed data to identify pertinent products, referenced to Specification Section and Article number. The Contractor shall show reference and piping diagrams and controls; component parts; finishes; dimensions and required clearances.

B. Modify manufacturer's standard schematic drawings and diagrams to supplement standard information and to provide information specifically applicable to the Work. Delete information not applicable.

C. Where Product Data is required, collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."

D. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

1. Manufacturer's Printed Recommendations

2. Compliance with Recognized Trade Association Standards

3. Compliance with Recognized Testing Agency Standards

4. Application of Testing Agency Labels and Seals

5. Notation of Dimensions Verified by Field Measurement

6. Notation of Coordination Requirements

7. Type and Model Numbers

Note: Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

E. Distribution: Furnish copies of final Submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.

1. Do not proceed with installation until a copy of Product Data applicable is in the installer's possession.

2. Do not permit use of unmarked copies of Product Data in connection with construction.

1.11 SAMPLES

A. Submit full range of manufacturer's standard finishes except when more restrictive requirements are specified, indicating colors, textures, and patterns, for Architect selection.

B. Submit samples to illustrate functional characteristics of products, including parts and attachments.

C. Approved samples that may be used in the Work are indicated in the Specification Section.

D. Label each sample with identification required for transmittal letter.

E. Provide field samples of finishes at Project, at location acceptable to Architect as required by individual Specifications section. Install each sample complete and finished. Acceptable finishes in place may be retained in completed work.

F. Where Samples are required, submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of manufactured or fabricated components, cuts or containers of materials, full color-range sets, and swatches showing color, texture, and pattern.

1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Include the following:

a. Generic Description of the Sample
b. Sample Source
c. Product Name or Name of Manufacturer
d. Compliance with Recognized Standards

G. Distribution of Samples: Prepare and distribute additional sets to Subcontractors, Manufacturers, fabricators, suppliers, installers, and others as required for performance of the work.

1. Field Samples specified in individual Sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the work will be judged.

a. Comply with submittal requirements to the fullest extent possible. Process transmittal forms to provide a record of activity.

H. Availability and Delivery Time

1. Colors:

a. General: Unless the precise color and pattern is specifically described in the Contract Documents, whenever a choice of color or pattern is available in a specified product, submit accurate color charts and pattern charts to the Architect for his review and selection.

2. Submit Samples for review of kind, color, pattern, and texture for a final check of these characteristics with other elements and for a comparison of these characteristics between the final Submittal and the actual component as delivered and installed.

a. Where variation in color, pattern, texture, or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3) that show approximate limits of the variations.
b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, and details of assembly, connections, operation, and similar construction characteristics.
c. Refer to other Sections for Samples to be returned to the Contractor for incorporation in the work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample Submittals.

3. Preliminary Submittals: Where Samples are for selection of color, pattern, texture, or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.

    a. Preliminary Submittals will be reviewed and returned with the Architect's mark indicating selection and other action.

4. Maintain sets of Samples, as returned, at the Project site for quality comparisons throughout the course of construction.

    a. Unless noncompliance with Contract Document provisions is observed, the Submittal may serve as the final Submittal.
    b. Sample sets may be used to obtain final acceptance of the construction associated with each set.

1.12 CERTIFICATES

A. When specified in individual specification sections, submit certification by manufacturer to Architect, in quantities specified for Product Data.

B. Indicate material or Product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Architect.

1.13 MANUFACTURER INSTALLATION INSTRUCTIONS

A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing to Architect.

B. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.14 CONTRACTOR REVIEW

A. Review submittals prior to transmittal; determine and verify field measurements, field construction criteria, manufacturer's catalog numbers, and conformance of submittal with requirements of Contract Documents.

B. Coordinate submittals with requirements of Work and of Contract Documents. (Computer printouts will not be acceptable as shop or setting drawings for structural materials and methods).

C. Indicate coordination of adjacent work (i.e. electrical, mechanical, plumbing, structural).

D. Do not fabricate products or begin work that requires submittals until return of submittal with Architect/Engineer acceptance.

1.15 RESUBMITTALS

A. One original submittal plus one re-submittal for any single item will be reviewed by the Architect as part of their scope of work. If a second re-submittal is required, the Contractor to pay the Architect a fee of $90.00 per hour for each hour required to analyze and approve the second re-submittal. Each additional re-submittal after the second re-submittal will be subjected to the same conditions.

B. Make re-submittals under procedures specified for initial submittals and identify changes made since previous submittal. Re-submittal must include all previous submitted material for specific items, including drawings that have been deleted or modified from original submission. The re-submittal shall bear the same number as the original submission with a revision date.

1.16 DISTRIBUTION

A. Duplicate and distribute reproductions of shop drawings, copies of product data, and samples, which bear Architect's stamp of review, to Project site file, Record Documents file, subcontractors, suppliers, other affected contractors, and other entities requiring information.

PART 2 - PRODUCTS

2.01 SUBSTITUTIONS

A. Source Limitations: To the greatest extent possible for each unit of work, provide products, materials, or equipment of a singular generic kind from a single source.

B. Compatibility of Options: Where more than one choice is available as options for Contractor's selection of a product or materials, select an option which is compatible with other products and materials already selected (which may have been from among options for those other products and materials). Total compatibility among options, if not assured by limitations within contract documents, must be provided by Contractor. Compatibility is a basic general requirement of product/material selections.

C. Architect and Owner's Approval Required:

1. In addition to the following, refer to the General Conditions, Article 4, for additional requirements.

2. The Contract is based on the materials, equipment, and methods described in the Contract Documents.

3. The Contract Drawings and Specifications establish the "minimum standard of quality" each product and/or system must meet to be considered acceptable. Products of other manufacturers will be considered if the product and/or system meets or exceeds the "minimum standard of quality" established by the Contract Documents.

4. The Architect and Owner will consider proposals for substitutions under the "or approved substitution" and the "or approved equal" provision of materials, equipment, and methods, only when such proposals are accompanied by full and complete technical data and all other information required by the Owner and Architect to evaluate the proposed substitutions.

    a. It will be the responsibility of the submitting Contractor to prove equality.
    b. Request must include "Contractor's Substitution Request" Form, a copy of which is attached to this Section,
    c. The Submittal shall include a line-by-line, item-by-item description of the specified and proposed product.

5. Requests for substitutions must be submitted to the Architect NO later than 60 days after date of Owner-Contractor Agreement.

6. DO NOT SUBSTITUTE MATERIALS, EQUIPMENT, OR METHODS UNLESS SUCH SUBSTITUTIONS HAVE BEEN SPECIFICALLY APPROVED FOR THIS WORK IN WRITING.

D. "Or Approved Equal" or "Or Approved Substitution"

1. Where the phrase "or approved equal" or "approved substitution" occurs in the Contract Documents, do not assume that material, equipment, or methods will be approved as equal by the Architect and Owner, unless the item has been specifically approved for this work.

a. Color choices will be one of the determining factors for approval.

2. The decision of the Architect and Owner will be final.

E. Availability of Specified Items:

1. Verify prior to bidding that all specified items will be available in time for installation during orderly and timely progress of the work.

2. In the event specified item or items will not be so available, so notify the Architect and Owner's Representative prior to the receipt of Bids.

3. Costs of delay caused on non-availability of specified items, when such delays could have been avoided by the Contractor, will be back-charged as necessary and shall not be borne by the Owner.

F. Whenever the Contractor secures approval for changing any items and such change involves a corresponding change or adjustment in any adjacent or related item, the responsibility for making the required change, or seeing that it is made, rests with the Contractor. The cost of these changes and/or adjustments shall be paid for by the Contractor unless it is otherwise agreed, in writing, at the time the change is approved. The acceptance of any change will not, in any way, relieve the Contractor from full compliance with the Contract Documents.

2.02 MANUALS

A. General: Where Manuals are required to be submitted covering items included in this work, prepare all such Manuals in durable plastic binders approximately 8-1/2 x 11 inches in size with at least the following:

1. Identification on or readable through the front cover stating the general nature of the Manual.

2. Neatly typewritten index near the front of the Manual furnishing immediate information as to location of all emergency data regarding the installation.

3. Complete instructions regarding operating and maintenance of all equipment involved.

4. Complete nomenclature of all replaceable parts, their part numbers, current cost, and name and address of nearest vendor of parts.

5. Copy of all guarantees and warranties issued.

6. Copy of approved Shop Drawing(s) with all data concerning all changes made during construction.

7. City of Lakeland requirements.

2.03 MISCELLANEOUS SUBMITTALS

A. Inspection and Test Reports (if required) Not Performed by Owner: Classify each inspection and test report as being either "Shop Drawings" or "Product Data" depending on whether the report is specially prepared for the project or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.

PART 3 - EXECUTION

3.01 COORDINATION OF SUBMITTALS (if applicable)

A. Refer to General Conditions, Article 16, for additional requirements.

B. General: Prior to submittal for Architect's review, use all means necessary to fully coordinate all material, including the following:

1. Secure all necessary approvals from public agencies and others. Signify by stamp or other means that all required approvals have been obtained.

2. Clearly indicate all deviations from the Contract Documents.

C. The General Contractor shall submit a prioritized tabulation by date of Submittals required during the first 30 days of construction (if applicable). List those Submittals required to maintain orderly progress of the work, and those required early because of long lead-time for manufacture or fabrication.

1. These dates may be shown on Construction Project Schedule at Contractor's option.

3.02 TIMING OF SUBMITTALS

A. General

1. Make all Submittals enough in advance of scheduled dates for installation to provide all required time for reviews for securing necessary approvals, for possible revision and re-submittals, and for placing orders and securing delivery.

2. In scheduling, allow a minimum of fourteen (14) full calendar days for the Architect's initial review following receipt of the Submittals. Allow additional time if the Architect requires coordination with subsequent Submittals.

a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until all related Submittals are received,
b. If an Intermediate Submittal is necessary, process the same as the initial Submittal. Allow fourteen (14) calendar days for reprocessing each Submittal.

- END OF SECTION -

General Contractor Project number:

RR Wedding Project number: **13-080**

Project	General Contractor
LAKELAND HOUSING AUTHORITY CECIL GOBER APARTMENTS- INTERIOR IMPROVEMENTS LAKELAND, FLORIDA	

Action Taken	Transmittal to:	Attention:	Date Sent	Date Received	Quantity		
					Print	Mfg Lit	Sample
	(to general contractor)						
	(to architect)						
	(to consultant)						
	(to architect)						
	(to general contractor)						
	(to subcontractor)						

R = Reviewed C = Correct & resubmit X = Rejected

Specification Section or Drawing no.	Date	Description

Contractor comments:	Architect/Engineer comments:

SECTION 015000

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. The installation and use of temporary facilities and controls for general construction progress of the Project as defined in this Section.

1.03 WATER

A. The Owner shall furnish water for construction of the Project from the existing building. The Contractor shall provide a safe sanitary means of furnishing drinking water to all personnel working on the Project.

1.04 ELECTRIC POWER AND SERVICE

A. The Owner shall provide electrical service from the existing building, and the Contractor shall make temporary wiring and outlets of sufficient size and capacity as required for power tools and temporary lighting at all convenient points within the building.

B. All wiring, switches, breakers, etc., to meet the requirements of the National Electric Code and OSHA.

C. A minimum light level of 30 foot candles to be maintained in all areas where construction work is being performed, except where natural light exceeds this requirement.

D. Contractor and Contractor's Subcontractors to have the electrical system in a state of completion sufficient for connection to permanent electrical service by the time the electricity is required for performing the testing of mechanical equipment.

1.05 TEMPORARY HEAT (IF REQUIRED)

A. Provide heat as necessary to protect all work and materials against injury from dampness and cold and to dry out the building. The local authorities shall approve all methods of heating. Take all precautions against possible spread of fire and damage to the building and/or equipment from smoke and soot.

1.06 TELEPHONE SERVICE AND FAX MACHINE

A. Provide and maintain local telephone service and a fax machine for the legitimate use of those connected with the work, throughout the duration of the Project.

1.07 TOILET FACILITIES

A. Provide and maintain in a sanitary condition at all times, temporary facilities and enclosures on the premises at a location approved by the Architect for the use of all workers on the Project. Facilities shall comply with the State Board of Health, OSHA and all local codes.

1.08 TEMPORARY EQUIPMENT

A. Provide and maintain equipment such as temporary stairs, ladders, ramps, runways, scaffolding, derricks, and chutes as required for proper execution of the work by all trades. When necessary, provide ladders to safely enable access to all parts of work by the Architect, Owner or any other person authorized to inspect the work. Construction of such apparatus and equipment shall be in compliance with the city and county ordinances, OSHA and state laws.

1.09 PROTECTION OF PROJECT (IF APPLICABLE)

A. Erect and maintain such barricades with light and other safety protective measures and other obstructions for the protection of the public and to protect all work as approved by the codes and the Architect.

B. Protect the Work and the property until completion of the Work.

C. Provide temporary closures and other security measures during non-working hours, all as approved by the Owner and Architect.

1.10 CONSTRUCTION OFFICE

A. Maintain a construction office, for the Contractor's and the Architect's use, in the existing building, in a location approved by the Architect and Owner, furnished with a plan table, plan rack, means of storage and adequate seating.

1.11 REMOVAL OF SERVICES

A. At the completion of the work, all temporary facilities to be removed and premises restored to an acceptable condition as directed by the Architect.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 015800

PROJECT SIGN

PART I – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Furnish, install and maintain the Project sign as shown or specified.

1.03 SUBMITTALS

A. Shop Drawings: Submit a shop drawing of the sign with footings, bracing, and color samples.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Lumber: No. 2 Pine or Douglas Fir, pressure-treated.

B. Plywood: 5/8 inch thick Exterior Grade A-C.

C. Attachment Devices: Galvanized steel.

D. Paint: Exterior grade latex acrylic. A primer as recommended by paint manufacturer.

PART 3 - EXECUTION

3.01 PERFORMANCE

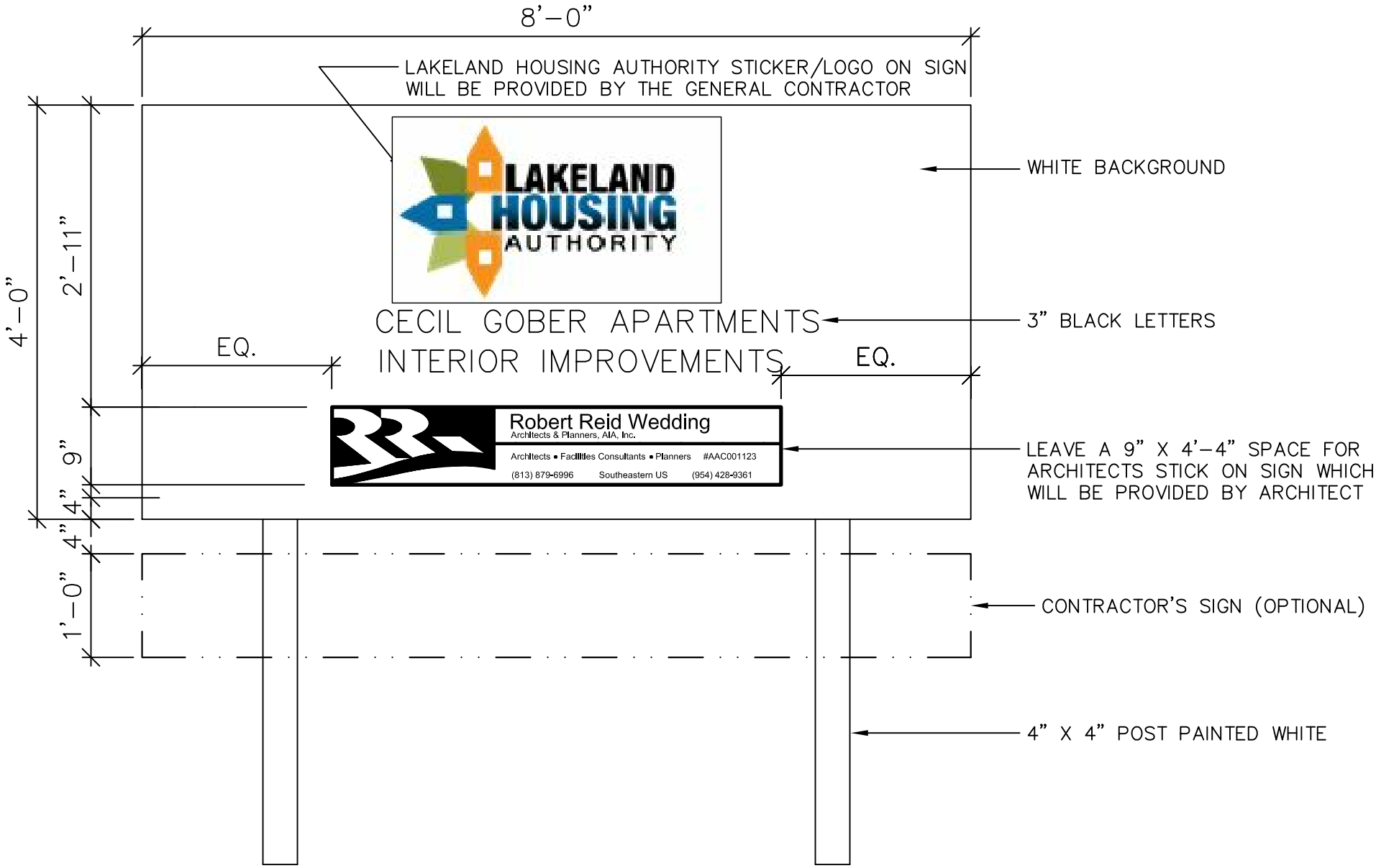
A. Construct sign in accordance with accepted trade practices and to withstand wind loads required by Florida Building Code.

1. Sign Size: 4 feet by 8 feet.

B. Sign painting by an experienced sign-lettering craftsman. “White” sign background with gloss “Black” lettering. Include name of project and name of Owner as indicated on the drawing.

C. Maintain sign in good condition for the duration of construction period. Remove from the site at Project completion.

- END OF SECTION -


8'–0"
LAKELAND HOUSING AUTHORITY STICKER/LOGO ON SIGN WILL BE PROVIDED BY THE GENERAL CONTRACTOR
LAKELAND HOUSING AUTHORITY
WHITE BACKGROUND
4'–0"
2'–11"
CECIL GOBER APARTMENTS
3" BLACK LETTERS
EQ.
INTERIOR IMPROVEMENTS
EQ.
Robert Reid Wedding
Architects & Planners, AIA, Inc.
Architects • Facilities Consultants • Planners #AAC001123
(813) 879-6996 Southeastern US (954) 428-9361
LEAVE A 9" X 4'–4" SPACE FOR ARCHITECTS STICK ON SIGN WHICH WILL BE PROVIDED BY ARCHITECT
9"
4"
4"
1'–0"
CONTRACTOR'S SIGN (OPTIONAL)
4" X 4" POST PAINTED WHITE

015800-2

SECTION 016000

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.02 SUMMARY

A. Section Includes:

1. Products

2. Transportation and Handling

3. Storage and Protection

4. General Product Requirements

B. Related Sections:

1. Section 013300 - Submittals

2. Section 013300 - Quality Control: Product quality monitoring.

1.03 QUALITY ASSURANCE

A. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

B. Provide interchangeable components of the same manufacturer, for components being replaced.

1.04 PRODUCT DELIVERY AND HANDLING

A. Transport and handle products in accordance with manufacturer's instructions.

B. Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.

C. Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.05 STORAGE AND PROTECTION

A. Store and protect Products in accordance with manufacturers' instructions, with seals and labels intact and legible.

B. Store sensitive Products in weather tight, climate controlled enclosures.

C. For exterior storage of fabricated Products, place on sloped supports, above ground.

D. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.

E. Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation or potential degradation of Product.

F. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

G. Provide equipment and personnel to store Products by methods to prevent soiling, disfigurement, or damage.

H. Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

PART 2 - PRODUCTS

2.01 General Product Requirements:

A. Semi-Open Proprietary Specification Requirements: Where Specifications name one or more products or manufacturers, provide one of the products indicated.

1. Where Specifications specify products or manufacturers by name, accompanied by the term "Approved Substitution", the Architect or Owner's Representative will allow products as substitutions only after complying with the requirements of the General Conditions and Section 013300.

B. The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:

1. Approved Manufacturers: Products by the listed manufacturers are acceptable for use on this Project, but these manufacturers do not have any strategic agreements.

PART 3 – EXECUTION - NOT USED

- END OF SECTION -

SECTION 017400

FINAL CLEANING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. Throughout all phases and items of the construction period, maintain the building and site in a standard of cleanliness as described in this Section including:

a. Cleaning Materials and Equipment
b. Progress Cleaning
c. Final Cleaning

B. Related Sections:

1. General Conditions.

2. In addition to standards described in this Section, comply with all requirements for cleaning-up as described in various other Sections of these Specifications.

1.03 QUALITY ASSURANCE

A. Inspection: Conduct daily inspection, and more often if necessary, to verify that requirements of cleanliness are being met

B. Codes and Standards: In addition to the standards described in this Section, comply with all pertinent requirements of Governmental agencies having jurisdiction.

C. Disposal of volatile fluid wastes (such as mineral spirits, oil, or paint thinner) in storm or sanitary sewer systems or into streams or waterways is not permitted.

PART 2 - PRODUCTS

2.01 CLEANING MATERIALS AND EQUIPMENT:

A. Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.02 COMPATIBILITY:

A. Use only the cleaning materials and equipment, which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the Owner's Representative.

PART 3 - EXECUTION

3.01 PROGRESS CLEANING

A. General:

1. Retain all stored items in an orderly arrangement allowing maximum access, not impeding traffic, and providing the required protection of materials.

2. Do not allow the accumulation of scrap, debris, waste material, and other items not required for the construction of this work.

3. Twice weekly, and more often if necessary, the Contractor shall completely remove all scrap debris and waste material from the job site and shall place into container furnished by the Contractor.

4. Provide adequate storage for all items awaiting removal from the job site, observing all requirements for fire protection.

B. Project Site; The Contractor shall:

1. Daily, and more often if necessary, inspect the project site and pick up all scrap, debris, and waste material. Remove all such items to the place designated for their storage.

2. Weekly, and more often if necessary, sweep all interior places clean. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from dust and other material capable of being removed by reasonable diligence using a hand-held broom.

3. As required preparatory to installation of succeeding materials, clean the pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using all equipment and materials required to achieve the required cleanliness.

4. Following the installation of finish floor materials, protect by covering with temporary coverings and/or clean the finish floor daily (and more often if necessary) at all times while work is being performed in the space in which finish materials have been installed. "Clean", for the purpose of this subparagraph, shall be interpreted as meaning free from all foreign material, which may be injurious to the finish floor material.

3.02 FINAL CLEANING

A. Definition: Except as otherwise specifically provided, "Clean" (for the purpose of this Article) shall be interpreted as meaning the level of cleanliness generally provided by commercial building maintenance Subcontractors using commercial quality building maintenance equipment and materials.

B. General: Prior to completion of the work, remove from the job site all tools, temporary structures, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.01 above.

C. Interior: Visually inspect all interior surfaces and remove all traces of soil, waste material, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Use only the specified cleaning materials and equipment.

D. Repair, patch, and touch-up marred or damaged surfaces to match adjacent finish.

E. Clean the following if located within the project area (if applicable):

1. Plumbing Fixtures, Strainers and Floor Drains

2. Light Fixtures and Lamps

3. Replace filters of ventilating equipment when units have been operating during construction. In addition, clean grilles and louvers.

4. Excess lubrication is to be removed from mechanical and electrical equipment.

5. The Electrical Panel(s) that work was preformed on.

F. Clean all transparent materials, including glass and mirrors. Remove glazing compound and other substances that are noticeable from vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.

G. Remove labels that are not permanent labels.

H. Polished and Resilient Surfaces: To all surfaces requiring the routine application of protective waxes and/or buffed polish, apply the specified coating and/or polish as recommended by the manufacturer of the material being treated, as specified in individual Specification Sections (if applicable).

I. Clean job site of rubbish, litter, and other foreign substances. Remove stains, spills, and other foreign deposits.

J. Maintain cleaning until the building remodeling, or portion thereof, is accepted by the Owner.

K. Timing: Schedule final cleaning as approved by the Architect to enable the Owner to accept a completely clean project.

- END OF SECTION -

SECTION 017700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Contract closeout requirements are specified in this Section.

B. Contract closeout in accordance with the City of Lakeland Housing Authority requirements.

1.03 SUBSTANTIAL COMPLETION

A. When Contractor considers work is substantially complete, shall submit to Architect:

1. Written notice that work, or designated portion, is substantially complete.

2. List of items to be completed or corrected.

B. Within reasonable time after receipt of such notice, Architect will make inspection to determine status of completion.

C. Should Architect determine work is not substantially complete?

1. Architect will promptly notify Contractor, in writing, giving reasons.

2. Contractor shall remedy deficiencies in work, and send second written notice of Substantial Completion to Architect.

3. Architect and Owner will re-inspect work.

D. When Architect concurs that work is substantially complete, Architect will:

1. Prepare Certificate of Substantial Completion on AIA Form G704, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by Architect.

1.04 FINAL INSPECTION

A. When Contractor considers work is complete, submit written certification that:

1. Contract Documents have been reviewed.

2. Work has been inspected for compliance with Contract Documents.

3. Work has been completed in accordance with Contract Documents.

4. Equipment and systems have been tested in presence of Owner's representative and are operational.

5. Work is completed and ready for final inspection.

6. All work shall comply with the City of Lakeland Housing Authority requirements.

B. Architect will make inspection to verify status of completion with reasonable promptness after receipt of such certification.

C. Should Architect consider that work is incomplete or defective?

1. Architect will promptly notify Contractor in writing, listing incomplete or defective work.

2. Contractor shall take immediate steps to remedy stated deficiencies, and send second written certification to Architect that work is complete.

3. Architect and Owner will re-inspect work.

D. When Architect finds that work is acceptable under the Contract Documents, Architect to request Contractor to make closeout submittals.

1.05 REINSPECTION FEES

A. Should Architect perform re-inspection, due to failure of work to comply with claims of status of completion made by Contractor?

1. Contractor will compensate Architect for such additional services. The compensation for this service shall be a fee of $1100.00 payable to the Architect. This fee shall be paid prior to the Architect making a reinspection of the work.

2. Architect retains the right to withhold approval of final payment until such compensation is received.

1.06 CONTRACTOR'S CLOSEOUT SUBMITTALS TO ARCHITECT

There shall be two (2) complete sets of Closeout Documents, packaged in a suitable booklet form, in the submittal.

A. Evidence of compliance with requirements of governing authorities

1. Certificate of Occupancy (if required).

2. Certificates of Inspection:

a. Mechanical (if required).
b. Electrical (if required).

B. Final Documents: At the time of execution of Certificate of Substantial Completion, Contractor shall submit to the Architect all items on attached Closeout Document Checklist, including but not limited to:

1. All affidavits and notarized certificates regarding waivers of lien and wage rates, if applicable.

2. Validated warranties and copies of all guarantees for equipment and materials as required by the Contract Documents.

3. Copies of all approved shop drawings or installation diagrams and two (2) copies of all brochures, manuals, and similar product data of all equipment as offered by the manufacturers.

4. The Contractor's one-year guarantee (Guarantee’s from all subcontractors).

5. List of Subcontractors and major material suppliers. Include address, telephone number and name of individual to contact regarding this project.

6. Record drawings of the completed project. In addition, provide two (2) copies of such drawings in "blue line" or “black line” print set on which has recorded, in colored pencils, all such changes. Include the location by dimension, from building walls of all buried construction, inside and outside the building. A professional draftsman shall provide all the drafting. Freehand mark-ups are unacceptable.

C. These items shall be packaged in a suitable booklet form and shall be properly indexed. Individual submission of these items will not be accepted.

1.07 INSTRUCTION TO PERSONNEL

A. Provide free instruction in the proper use of installed equipment to designated representatives of the Owner.

1.08 GUARANTEE, TESTING AND MAINTENANCE

A. The Contractor guarantees that all materials used and workmanship performed in connection with this Contract, shall be free from defects for a period of one (1) year from date of execution of Certificate of Substantial Completion (unless otherwise stated).

B. Submit to the Architect, along with final requisition for payment, two (2) copies of a manual, assembled and bound, presenting for the Owner's guidance, full details for care and maintenance of equipment included in the Contract.

C. During a valid warranty period, if the Contractor is unable or unwilling to respond immediately to make emergency repairs under conditions that the Owner may determine to be an emergency situation, the Owner reserves the right, and the Contractor recognizes such right, to make such emergency repairs and then to bill the Contractor for a fair and reasonable amount in reimbursement for such repairs.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

- END OF SECTION -

SECTION 017836

WARRANTIES AND BONDS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section Includes:

1. This Section specifies general administrative and procedural requirements for warranties, guarantees, and bonds required by the Contract Documents, including manufacturers standard warranties on products and special warranties. Warranties required by the Specifications, in the applicable specification section, shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to other warranties made by the Contractor under the Contract Documents.

2. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and Subcontractors required to counter-sign special warranties with the Contractor.

B. Related Sections:

1. Additional requirements as specified in General Conditions.

2. General closeout requirements are included in Section 017700, Contract Closeout.

3. Warranties, including requirements for certifications for the work and products and installation that are specified to be warranted, are stated in the individual units of work specified in the applicable specification sections.

4. Specific certification requirements and other commitments and agreements for continuing services to the Owner are specified elsewhere in the Contract Documents.

1.03 DEFINITIONS

A. Categories of Specific Warranties: Warranties on the work are in several categories, including those of General Conditions, and including (but not necessarily limited to) the following specific categories related to individual units of work specified in the applicable sections of these Specifications.

1. Special Project Warranty (Guarantee): A warranty specifically written and signed by Contractor for a defined portion of the Work and, where required, countersigned by Subcontractor, installer, manufacturer, or other entity engaged by Contractor.

2. Specified Product Warranty: A warranty which is required by Contract Documents, to be provided for a manufactured product incorporated into the Work, regardless of whether manufacturer has published a similar warranty without regard for specific incorporation of product into the Work, or has written and executed a special project warranty as a direct result of Contract Documents requirements.

3. Coincidental Product Warranty: A warranty which is not specifically required by Contract Documents (other than as specified in this Section), but which is available on a product incorporated into the work by virtue of the fact that manufacturer of product has published warranty in connection with purchases and uses of product without regard for specific applications, except as otherwise limited by terms of warranty.

1.04 SUBMITTALS

A. If the date of Substantial Completion designates a commencement date for warranties other than the proposed date of Substantial Completion for the Work, or a designated portion of the Work, the Contractor shall submit written warranties upon request of the Owner, in accordance with this Section.

B. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, properly executed warranties should be submitted to the Owner within 15 days of completion of that designated portion of the Work.

C. When a special warranty is required to be executed by the Contractor, or the Contractor and a Subcontractor, supplier or manufacturer, a written document should be prepared which contains appropriate terms and identification, ready for execution by the required parties. Draft copies should be submitted for approval prior to final execution.

D. Refer to individual applicable section for specific content requirements, and particular requirements for submittal of special warranties.

E. Final Form of Submittal: Prior to certification for Substantial Completion, compile two original copies of each approved warranty and bond properly executed by the Contractor, or by the Contractor, Subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Specifications.

1. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders.

F. Provide additional photocopies of each warranty for inclusion in the appropriate volume of the Operating and Maintenance Manuals.

1.05 QUALITY ASSURANCE

A. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and Subcontractors required to counter-sign special warranties with the Contractor.

1.06 WARRANTY REQUIREMENTS

A. Conform to General Conditions, Article 37, the City of Lakeland requirements and the following:

1. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

2. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding; reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with date of revised warranty beginning from date of repair.

3. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

B. Owner's Recourse: Written warranties made to the Owner are in addition to implied warranties, and shall not limit the duties, obligations, right and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.

C. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.

D. The Owner reserves the right to refuse to accept Work for the Project where a special warranty, certification, or similar commitment is required on such Work or part of the Work, until evidence is presented that entities required to counter-sign such commitments are willing to do so.

E. In the event that the Owner or any of its agents takes possession of the Work or any portion thereof, pursuant to the Contract Provisions, warranties shall not start until such work, or portions thereof, are separately and finally accepted. Warranty coverage for system components shall not become effective until the Owner makes final acceptance of the system or a separate portion of the system containing the component. All affected warranties shall continue in force for a period of at least one (1) year from the date of final acceptance of the work or any portion thereof.

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

- END OF SECTION -

DIVISION 2 – EXISTING CONDITIONS

SECTION 024119

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Selective interior demolition and removal.
2. Salvage of existing items to be reused.

1.3 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

1.4 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
4. Review areas where existing construction is to remain and requires protection.

1.5 SUBMITTALS

A. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
2. Interruption of utility services. Indicate how long utility services will be interrupted.

3. Coordination for shutoff, capping, and continuation of utility services.

B. Inventory: Submit a list of items to be removed and salvaged and deliver to Owner prior to start of demolition.

C. Predemolition Photographs: Submit before Work begins.

1.6 FIELD CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. Hazardous materials will be removed by Owner before start of the Work.

D. Storage or sale of removed items or materials on-site is not permitted.

E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped before starting selective demolition operations.

B. Review record documents of existing construction provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in record documents.

C. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

1. Inventory and record the condition of items to be removed and salvaged. Provide photographs of conditions that might be misconstrued as damage caused by salvage operations.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.

B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.

1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
2. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
3. Disconnect, demolish, and remove plumbing and HVAC systems, equipment, and components indicated to be removed.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
4. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete Slabs-on-Grade: Saw-cut perimeter of area to be demolished, then break up and remove.

B. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings."

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 024119

DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

SECTION 061000

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Framing with dimension lumber.
2. Wood blocking and nailers.
3. Wood furring.

1.3 SUBMITTALS

A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

B. Evaluation Reports: For the following, from ICC-ES:

1. Wood-preservative-treated wood.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

A. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

1. Factory mark each piece of lumber with grade stamp of grading agency.
2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
3. Provide dressed lumber, S4S, unless otherwise indicated.

B. Maximum Moisture Content of Lumber: 19 percent.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.

B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Do not use material that is warped or that does not comply with requirements for untreated material.

C. Mark lumber with treatment quality mark of an inspection agency approved by the ALSC Board of Review.

D. Application: Treat items indicated on Drawings.

2.3 DIMENSION LUMBER FRAMING

A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.

1. Application: All interior partitions.
2. Species: Mixed southern pine; SPIB.

2.4 MISCELLANEOUS LUMBER

A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

1. Blocking.
2. Nailers.
3. Furring.

B. For items of dimension lumber size, provide Construction or No. 2 and the following species:

1. Mixed southern pine; SPIB.

C. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.

2.5 FASTENERS

A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.

B. Nails, Brads, and Staples: ASTM F 1667.

C. Power-Driven Fasteners: NES NER-272.

D. Wood Screws: ASME B18.6.1.

E. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.

F. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry assemblies and equal to four times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.

1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, and similar supports to comply with requirements for attaching other construction.

B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.

C. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.

1. Provide metal clips for fastening gypsum board at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches o.c.

D. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

E. Comply with AWPA M4 for applying field treatment to cut surfaces of preservative-treated lumber.

F. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

G. Use steel common nails unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood. Drive nails snug but do not countersink nail heads unless otherwise indicated.

3.2 WOOD BLOCKING, AND NAILER INSTALLATION

A. Install where indicated and where required for attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.

B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces unless otherwise indicated.

3.3 WOOD FURRING INSTALLATION

A. Install level and plumb with closure strips at edges and openings. Shim with wood as required for tolerance of finish work.

3.4 PARTITION FRAMING INSTALLATION

A. General: Provide single bottom plate and double top plates using members of 2-inch nominal thickness whose widths equal that of studs, except single top plate may be used for non-load-bearing partitions. Fasten plates to supporting construction unless otherwise indicated.

1. For interior partitions, provide 2-by-4-inch nominal size wood studs spaced 16 inches o.c. unless otherwise indicated.

B. Construct corners and intersections with three or more studs, except that two studs may be used for interior non-load-bearing partitions.

C. Frame openings with multiple studs and headers. Provide nailed header members of thickness equal to width of studs. Support headers on jamb studs.

1. For non-load-bearing partitions, provide double-jamb studs and headers not less than 4-inch nominal depth for openings 48 inches and less in width, 6-inch nominal depth for openings 48 to 72 inches in width, 8-inch nominal depth for openings 72 to 120 inches in width.

END OF SECTION 061000

SECTION 064600

WOOD TRIM

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior standing and running trim.
2. Shop priming of wood trim.

1.3 SUBMITTALS

A. Product Data: For each type of product.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For fabricator.

1.5 QUALITY ASSURANCE

A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver wood trim until operations that could damage wood trim have been completed in installation areas. If wood trim must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.7 FIELD CONDITIONS

A. Environmental Limitations for Interior Work: Do not deliver or install interior wood trim until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 WOOD TRIM FABRICATORS

A. Basis of Design Fabricator: S&S Craftsmen. Products as indicated on Drawings.

2.2 WOOD TRIM, GENERAL

A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades of wood trim indicated for construction, finishes, installation, and other requirements.

2.3 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

A. Grade: Custom.

B. Wood Species: Any closed-grain hardwood.

2.4 WOOD MATERIALS

A. Wood Products: Provide materials that comply with requirements of referenced quality standard for each type of wood trim and quality grade specified unless otherwise indicated.

1. Do not use plain-sawn softwood lumber with exposed, flat surfaces more than 3 inches wide.
2. Wood Moisture Content for Interior Materials: 8 to 13 percent.

2.5 FABRICATION

A. Fabricate wood trim to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:

1. Edges of Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.

B. Backout or groove backs of flat trim members and kerf backs of other wide, flat members except for members with ends exposed in finished work.

C. Assemble casings in shop except where shipping limitations require field assembly.

2.6 SHOP PRIMING

A. Interior Wood Trim for Opaque Finish: Shop prime with one coat of wood primer specified in Section 099123 "Interior Painting."

B. Preparations for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing wood trim, as applicable to each unit of work.

1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of wood trim.

PART 3 - EXECUTION

3.1 PREPARATION

A. Before installation, condition wood trim to average prevailing humidity conditions in installation areas.

B. Before installing architectural wood trim, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

A. Grade: Install wood trim to comply with same grade as item to be installed.

B. Assemble wood trim and complete fabrication at Project site to the extent that it was not completed in the shop.

C. Install wood trim level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.

D. Scribe and cut wood trim to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

E. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 96 inches long except where shorter single-length pieces are necessary.

1. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.

F. Refer to Section 099113 "Interior Painting" for final finishing of installed wood trim.

3.3 ADJUSTING AND CLEANING

A. Repair damaged and defective wood trim, where possible, to eliminate functional and visual defects; where not possible to repair, replace wood trim. Adjust joinery for uniform appearance.

B. Clean wood trim on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064600

SECTION 066116

SOLID SURFACING FABRICATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Solid surfacing panels for shower surrounds.

1.3 SUBMITTALS

A. Product Data: For each type of product. Include manufacturer's written installation instructions.

B. Shop Drawings: Indicate dimensions, component sizes, fabrication details, and attachment provisions.

C. Verification Samples: For selected color, pattern, and finish. Minimum 2 inch by 2 inch sample size.

D. Closeout Submittals: include manufacturer's written care and maintenance data, including repair and cleaning instructions.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store solid surfacing materials to preclude breakage or marring of surfaces according to manufacturer's written instructions.

B. Provide protective coverings to preclude physical damage or staining after installation through remainder of construction period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: “Swanstone Solid Surfacing”; The Swan Corporation.

2.2 SOLID SURFACING MATERIAL

A. Description: Homogenous compression molded material composed of acrylic resins or polyester/acrylic resin blend, fire-retardant filler materials, fiber reinforcement, and coloring agents.

B. Physical Characteristics:

1. Nominal Sheet Thickness: 0.250 inch.
2. Surface Burning Characteristics: Maximum 15 flamespread, maximum 225 smoke development; ASTM E 84.
3. Stain Resistance: Passes; ANSI Z124.3.
4. Abrasion Resistance: Passes; ANSI Z124.3.
5. Bacterial Resistance: No Growth; ASTM G 22.
6. Boiling Water Resistance: No effect; NEMA LD 3, Method 3.5.
7. High Temperature Resistance: No effect for sustained temperature up to 375 deg F.; NEMA LD 3, Method 3.6.

C. Color: Indicated on Drawings.

2.3 ACCESSORIES

A. Adhesive: As recommended by solid surfacing fabrications manufacturer.

B. Sealants: Mildew-resistant silicone-based elastomeric sealant. Color matched to solid surfacing panels.

2.4 FABRICATION

A. Fabricate solid surfacing components in shop, to greatest extent practicable, to sizes and shapes indicted, and according to approved shop drawings.

B. Form joints between components with manufacturer’s standard joint adhesive. Completed joints inconspicuous in appearance and without voids.

C. Provide holes and cutouts for plumbing fixtures and shower accessories as indicated on Drawings.

D. Rout and finish component edges to a smooth, uniform finish.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Clean substrates of substances that could impair adhesive bond, including oil, grease, dirt, and dust.

B. Condition solid surfacing materials by unpacking and placing in installation space before installation according to manufacturer's written recommendations.

3.3 INSTALLATION

A. Install solid surfacing panels plumb, true, and level according to approved shop drawings and manufacturer’s written installation instructions.

B. Form field joints using manufacturer’s recommended adhesive, with joints inconspicuous in finished work.

C. Promptly remove excess adhesives and sealants from completed surfaces of shower surrounds and according to manufacturer’s written instructions.

D. Protect completed work from damage through remainder of construction period.

END OF SECTION 066116

DIVISION 07 - THERMAL & MOISTURE PROTECTION

SECTION 079200

JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Silicone joint sealants.
2. Latex joint sealants.

B. Related Requirements:

1. Section 092900 "Gypsum Board" for sealing perimeter joints.

1.3 ACTION SUBMITTALS

A. Product Data: For each joint-sealant product indicated.

B. Product Certificates: For each kind of joint sealant and accessory, from manufacturer.

C. Warranties: Sample of special warranties.

1.4 PROJECT CONDITIONS

A. Do not proceed with installation of joint sealants under conditions outside of manufacturer’s written limitations:

1.5 WARRANTY

A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

B. Colors of Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 SILICONE JOINT SEALANTS

A. Mildew-Resistant, Single-Component, Acid-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use NT.

1. Products: Provide one of the following:

a. BASF Building Systems; Omniplus.
b. Dow Corning Corporation; 786 Mildew Resistant.
c. GE Advanced Materials - Silicones; Sanitary SCS1700.
d. Tremco Incorporated; Tremsil 200 Sanitary.

2.3 LATEX JOINT SEALANTS

A. Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.

1. Products: Provide one of the following:

a. BASF Building Systems; Sonolac.
b. Bostik, Inc.; Chem-Calk 600.
c. Pecora Corporation; AC-20+.
d. Tremco Incorporated; Tremflex 834.

2.4 JOINT SEALANT BACKING

A. General: Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin, and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint. Provide self-adhesive tape where applicable.

2.5 MISCELLANEOUS MATERIALS

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.

C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:

1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints, old joint sealants, oil, grease, water, and surface dirt.

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.

C. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

1. Do not leave gaps between ends of sealant backings.
2. Do not stretch, twist, puncture, or tear sealant backings.
3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.

D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.

E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
2. Completely fill recesses in each joint configuration.
3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

F. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile, unless otherwise indicated.

3.4 CLEANING

A. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.5 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from original work.

3.6 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Locations:

    a. Control and expansion joints on exposed interior surfaces of exterior walls.
    b. Perimeter joints of exterior openings where indicated.
    c. Tile control and expansion joints.
    d. Vertical joints on exposed surfaces of partitions.
    e. Perimeter joints between interior wall surfaces and frames of interior doors.
    f. Other joints as indicated.

2. Joint Sealant: Latex.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

B. Joint-Sealant Application: Mildew-resistant interior joints in vertical surfaces and horizontal nontraffic surfaces.

1. Joint Sealant Location:

    a. Joints between plumbing fixtures and adjoining walls, floors, and counters.
    b. Tile control and expansion joints where indicated.
    c. Other joints as indicated.

2. Joint Sealant: Single component, nonsag, mildew resistant, acid curing silicone.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors.

END OF SECTION 079200

DIVISION 08 - OPENINGS

SECTION 081416

FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Hollow-core doors with wood-veneer faces.
2. Factory finishing flush wood doors.
3. Factory fitting flush wood doors to frames and factory machining for hardware.

1.3 SUBMITTALS

A. Product Data: For each type of door. Include details of core and edge construction. Include factory-finishing specifications.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:

1. Dimensions and locations of blocking.
2. Dimensions and locations of mortises and holes for hardware.
3. Dimensions and locations of cutouts.
4. Undercuts.
5. Doors to be factory finished and finish requirements.

C. Samples for Verification:

1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish.

1.4 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For special warranty.

B. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

B. Package doors individually in plastic bags or cardboard cartons.

C. Mark each door on bottom rail with opening number used on Shop Drawings.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install doors until wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during remainder of construction period.

1.7 WARRANTY

A. A. Special Warranty: Manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:

    a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
    b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.

2. Warranty Period for Hollow-Core Interior Doors: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Algoma Hardwoods, Inc.
2. Ampco.
3. Chappell Door Co.
4. Eggers Industries.
5. Graham Wood Doors; an Assa Abloy Group company.

6. Marlite.
7. Marshfield Door Systems, Inc.
8. Mohawk Doors; a Masonite company.
9. VT Industries, Inc.

2.2 FLUSH WOOD DOORS, GENERAL

A. Quality Standard: In addition to requirements specified, comply with AWI's "Architectural Woodwork Standards."

B. Hollow-Core Doors:

1. Construction: Standard hollow core.
2. Blocking: Provide wood blocking with minimum dimensions as follows:

a. 5-by-18-inch lock blocks at both stiles.

2.3 VENEER-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Hollow-Core Doors:

1. Grade: Custom (Grade A faces).
2. Species and Cut: Match existing.
3. Exposed Vertical Edges: Same species as faces - edge Type A.
4. Construction: Seven plies.

2.4 FABRICATION

A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.

B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, BHMA-156.115-W, and hardware templates.

2.5 FACTORY FINISHING

A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.

1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.

B. Factory finish doors.

C. Transparent Finish:

1. Grade: Custom.
2. Finish: AWI's "Architectural Woodwork Standards" System 5, conversion varnish or System 11, catalyzed polyurethane.
3. Staining: Match existing.
4. Effect: Match existing.
5. Sheen: Satin.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames, with Installer present, before hanging doors.

1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
2. Reject doors with defects.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Hardware: For installation, see Section 087100 "Door Hardware."

B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081416

SECTION 081433

STILE AND RAIL WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior stile and rail wood doors.
2. Finishing stile and rail wood doors.
3. Fitting stile and rail wood doors to frames and machining for hardware.
4. Prehanging doors in frames.

1.3 SUBMITTALS

A. Product Data: For each type of product.

1. Include details of construction.
2. Include factory-finishing specifications.

B. Shop Drawings: For stile and rail wood doors. Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in product data.

C. Sample Warranty: For special warranty.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of referenced standard and manufacturer's written instructions.

B. Package doors individually in opaque plastic bags or cardboard cartons.

C. Mark each door on bottom rail with opening number used on Shop Drawings.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install doors until wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during remainder of construction period.

1.6 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace doors that fail in materials or workmanship, or have warped (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section, within specified warranty period.

1. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
2. Warranty shall be in effect during the following period of time from date of Substantial Completion:

    a. Interior Doors: Five years.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Use only materials that comply with referenced standards and other requirements specified.

1. Assemble interior doors, including components, with either dry-use or wet-use adhesives complying with ASTM D 5572 for finger joints and with ASTM D 5751 for joints other than finger joints.

2.2 INTERIOR STILE AND RAIL WOOD DOORS

A. Interior Stile and Rail Wood Doors: Interior stock doors complying with the AWI's "Architectural Woodwork Standards," and with other requirements specified.

1. Basis of Design Manufacturer: Refer to Drawings.
2. Panel Designs: Indicated on Drawings. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
3. Grade: Custom.
4. Finish: Transparent.
5. Wood Species and Cut for Transparent Finish: Match existing.

6. Door Construction for Transparent Finish:

   a. Stile and Rail Construction: Veneered, structural composite lumber or veneered, edge- and end-glued clear lumber. Select veneers for similarity of grain and color, and arrange for optimum match between adjacent pieces. Use veneers not less than 1/16 inch thick.

7. Stile and Rail Widths: As indicated.

2.3 STILE AND RAIL WOOD DOOR FABRICATION

A. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances and bevels unless otherwise indicated:

   1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/2 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide not more than 3/8 inch from bottom of door to top of threshold.

   2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.

B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, BHMA-156.115-W, and hardware templates.

   1. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before factory machining.

C. Prehung Doors: Provide stile and rail doors complete with frames, and hardware. Refer to Drawings for required hardware.

2.4 FINISHING

A. Finish wood doors at factory.

B. For doors indicated to be factory finished, comply with the AWI's "Architectural Woodwork Standards," and with other requirements specified.

   1. Finish faces and all four edges of doors, including mortises and cutouts. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.

C. Transparent Finish:

1. Grade: Custom.
2. Finish: AWI's "Architectural Woodwork Standards" System 5, conversion varnish or System 11, catalyzed polyurethane.
3. Staining: Match existing.
4. Effect: Match existing.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames, with Installer present, before hanging doors.

1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
2. Reject doors with defects.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

1. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.

B. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

C. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

3.3 ADJUSTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Replace doors that are damaged or do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION 081433

SECTION 087100

DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Provide door hardware as indicated on the Drawings and specified herein.

B. Related Requirements:

1. Section 081416 “Flush Wood Doors.”
2. Section 081433 “Stile and Rail Wood Doors.”

1.3 SUPPLIER QUALIFICATIONS

A. Door Hardware supplier acceptable to Architect and with appropriate technical knowledge and experience. Supplier to provide the on-site services of an Architectural Hardware Consultant (AHC) to approve hardware installation during course of the work. The AHC will be required to inspect the completed work prior to Substantial Completion. Supplier to be a bonafide direct distributor of all hardware materials and components to be furnished for this Project.

1.4 SUBMITTALS

A. Product Data: Catalog cut for each hardware item in hardware schedule.

B. Hardware Schedule: Submit a complete typewritten hardware schedule.

1. Hardware schedule to indicate each door and frame location, size, swing, material, and any other applicable information necessary for complete and proper installation of door hardware.
2. Each item in the hardware schedule identified on the first page of the schedule by the manufacturer's name.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver all door hardware items to the Project site, and check in for completeness. All items packaged, numbered, and labeled to identify each opening for which they are intended and to correspond with item numbers on the approved hardware schedule.

B. Receive, handle and store hardware items in a clean, dry and secure space until installed.

PART 2 - PRODUCTS

2.1 FINISHES

A. Refer to Drawings for hardware finishes.

2.2 HINGES

A. Doors 1-3/4 Inches Thick: Minimum 4-1/2 inches high.

B. Each door to have three hinges.

C. Plain-bearing hinges unless otherwise indicated on Drawings.

D. Acceptable Manufacturers: Refer to Drawings.

2.3 LOCKSETS

A. Basis of Design: Refer to Drawings.

B. All levers, locksets, and cylinders by the lockset manufacturer.

C. All latch bolts to have 3/4 inch throw. All deadbolts with hardened steel inserts and 1 inch throw.

2.4 FASTENERS

A. All screws finished to match hardware and suitable for intended use.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Fastening Hardware Items: For solid wood, use wood screws. For hollow core wood doors, use thru bolts or machine screws to reinforced metal.

B. Accurately fit, securely install, and properly adjust all door hardware items.

C. Hardware Locations:

1. Door Levers: Center door levers 38 inches above floor.

2. Hinges: 10 inches from floor to bottom hinges, 5 inches from top. Center hinge equidistant between top and bottom hinge.

3.2 HARDWARE SETS

A. Refer to Drawings.

END OF SECTION 087100

DIVISION 09 - FINISHES

SECTION 092216

NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Non-load-bearing steel framing systems for interior gypsum board assemblies.

1.3 SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 FRAMING SYSTEMS

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
2. Protective Coating: ASTM A 653/A 653M, G40, hot-dip galvanized unless otherwise indicated.

B. Studs and Runners: ASTM C 645.

1. Steel Studs and Runners:

a. Minimum Base-Metal Thickness: 0.018 inch.
b. Depth: 3-5/8 inches.

C. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.

1. Minimum Base-Metal Thickness: 0.018 inch.

2.3 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards.

1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754.

1. Gypsum Veneer Plaster Assemblies: Also comply with requirements in ASTM C 844 that apply to framing installation.
2. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.

B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

C. Install bracing at terminations in assemblies.

3.3 INSTALLING FRAMED ASSEMBLIES

A. Install framing system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

1. Single-Layer Application: 16 inches o.c. unless otherwise indicated.
2. Tile Backing Panels: 16 inches o.c. unless otherwise indicated.

B. Install studs so flanges within framing system point in same direction.

C. Install tracks (runners) at floors and overhead supports as indicated on Drawings.

1. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

    a. Install two studs at each jamb unless otherwise indicated.

2. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.

D. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION 092216

SECTION 092613

GYPSUM VENEER PLASTERING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Gypsum veneer plaster and gypsum base for veneer plaster.

B. Related Requirements:

1. Section 092216 "Non-Structural Metal Framing" for non-load-bearing steel framing.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For the following products:

1. Textured Finishes: Manufacturer's standard size for each textured finish and on rigid backing.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original packages, containers, and bundles bearing brand name and identification of manufacturer or supplier.

B. Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

C. Stack panels flat on leveled supports off floor or slab to prevent sagging.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 843 requirements or gypsum veneer plaster manufacturer's written recommendations, whichever are more stringent.

B. Room Temperatures: Maintain not less than 55 deg F or more than 80 deg F for seven days before application of gypsum base and gypsum veneer plaster, continuously during application, and after application until veneer plaster is dry.

C. Avoid conditions that result in gypsum veneer plaster drying too rapidly.

1. Distribute heat evenly; prevent concentrated or uneven heat on veneer plaster.
2. Maintain relative humidity levels, for prevailing ambient temperature, that produce normal drying conditions.
3. Ventilate building spaces in a manner that prevents drafts of air from contacting surfaces during veneer plaster application until it is dry.

D. Do not install panels that are wet, moisture damaged, or mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Source Limitations: Obtain gypsum veneer plaster products, including gypsum base for veneer plaster, joint reinforcing tape, and embedding material, from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

A. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.3 GYPSUM VENEER PLASTER

A. Two-Component Gypsum Veneer Plaster: ASTM C 587, with separate formulations; one for base-coat application and one for finish-coat application over substrates.

1. Base Coat:

a. Products: Subject to compliance with requirements, provide one of the following:

1) National Gypsum Company; Kal-Kote Plaster Base.
2) USG Corporation; Diamond Veneer Basecoat Plaster.

2. Textured Finish Coat:

a. Products: Subject to compliance with requirements, provide one of the following:

1) National Gypsum Company; Kal-Kote Texture Finish.
2) USG Corporation; Job-Aggregated Diamond Interior Finish.

2.4 PANEL PRODUCTS

A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

B. Gypsum Base for Veneer Plaster, Type X: ASTM C 1396/C 1396M.

1. Products: Subject to compliance with requirements, provide one of the following:

a. CertainTeed Corp.; ProRoc Veneer Plaster Base, Type X.
b. Georgia-Pacific Gypsum LLC, Subsidiary of Georgia Pacific; Tough Rock Fireguard Veneer Plaster Base.
c. National Gypsum Company; Kal-Core Fire-Shield, Type X.

2. Thickness: 5/8 inch.

2.5 TRIM ACCESSORIES

A. Standard Trim: ASTM C 1047, provided or approved by manufacturer for use in gypsum veneer plaster applications indicated.

1. Material: Galvanized-steel sheet or aluminum-coated steel sheet; rolled zinc, plastic, or paper-faced galvanized-steel sheet.
2. Shapes:

a. Cornerbead.
b. LC-Bead: J-shaped; exposed long flange receives veneer plaster.
c. L-Bead: L-shaped; exposed long flange receives veneer plaster.

2.6 JOINT REINFORCING MATERIALS

A. General: Comply with joint strength requirements in ASTM C 587 and with gypsum veneer plaster manufacturer's written recommendations for each application indicated.

B. Joint Tape:

1. Gypsum Base for Veneer Plaster: As recommended by gypsum veneer plaster manufacturer for applications indicated.

C. Embedding Material for Joint Tape:

1. Gypsum Base for Veneer Plaster: As recommended by gypsum veneer plaster manufacturer for use with joint-tape material and gypsum veneer plaster applications indicated.

2.7 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced product standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.

C. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing), produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

D. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 843. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction, as demonstrated by testing representative assemblies according to ASTM E 90.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, or mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLING PANELS, GENERAL

A. Gypsum Base for Veneer Plaster: Apply according to ASTM C 844 unless manufacturer's written recommendations are more stringent.

1. Do not allow gypsum base to degrade from exposure to sunlight, as evidenced by fading of paper facing.
2. Erection Tolerance: No more than 1/16-inch offsets between planes of gypsum base panels, and 1/8 inch in 8 feet noncumulative, for level, plumb, warp, and bow.

B. Install sound attenuation blankets before installing gypsum base for veneer plaster.

C. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

D. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

E. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not locate joints, other than control joints, at corners of framed openings.

F. Attach panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

G. Attach panels to framing provided at openings and cutouts.

H. Cover both sides of partition framing with panels in concealed spaces, including above ceilings.

1. Fit panels around ducts, pipes, and conduits.

I. Wood Framing: Install panels over wood framing, with "floating" internal corner construction. Do not attach panels across the flat grain of wide-dimension lumber, including floor joists and headers. "Float" panels over these members or provide control joints to counteract wood shrinkage.

J. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

K. Fastener Spacing: Comply with ASTM C 844, manufacturer's written recommendations, and fire-resistance-rating requirements.

1. Space screws a maximum of 12 inches o.c. along framing members for wall or ceiling application.

3.3 INSTALLING PANELS

A. Install panels for veneer plaster in locations indicated on Drawings.

B. Single-Layer Application:

1. On ceilings, apply gypsum base panels before wall panels, to the greatest extent possible and at right angles to framing unless otherwise indicated.
2. On walls, apply gypsum base panels vertically and parallel to framing unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.

    a. Stagger abutting end joints not less than one framing member in alternate courses of panels.

C. Fasteners: Drive fasteners flush with gypsum base surface. Do not overdrive fasteners or cause surface depressions.

D. Single-Layer Fastening Methods: Apply gypsum base panels to supports with steel drill screws.

3.4 INSTALLING TRIM ACCESSORIES

A. General: Install trim with back flanges intended for fasteners, and attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.
2. LC-Bead: Use at exposed panel edges.
3. L-Bead: Use where indicated.

3.5 INSTALLING JOINT REINFORCEMENT

A. Gypsum Base: Reinforce interior angles and flat joints with joint tape and embedding material to comply with ASTM C 843 and with gypsum veneer plaster manufacturer's written recommendations.

3.6 GYPSUM VENEER PLASTERING

A. Gypsum Veneer Plaster Mixing: Mechanically mix gypsum veneer plaster materials to comply with ASTM C 843 and with gypsum veneer plaster manufacturer's written recommendations.

B. Gypsum Veneer Plaster Application: Comply with ASTM C 843 and with veneer plaster manufacturer's written recommendations.

1. Two-Component Gypsum Veneer Plaster:

a. Base Coat: Hand trowel or machine apply base coat over substrate to a uniform thickness of 1/16 to 3/32 inch. Fill all voids and imperfections.
b. Finish Coat: Trowel apply finish-coat plaster over base-coat plaster to a uniform thickness of 1/16 to 3/32 inch.

C. Concealed Surfaces: Do not omit gypsum veneer plaster behind cabinets, furniture, furnishings, and similar removable items.

D. Gypsum Veneer Plaster Finish: Textured finish matching existing.

3.7 PROTECTION

A. Protect installed gypsum veneer plaster from damage from weather, condensation, construction, and other causes during remainder of the construction period.

B. Remove and replace gypsum veneer plaster and gypsum base panels that are wet, moisture damaged, or mold damaged.

1. Indications that gypsum base panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, and irregular shape.
2. Indications that gypsum base panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092613

SECTION 092900

GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Interior gypsum board.
2. Tile backing panels.
3. Texture finishes.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood framing that supports gypsum board panels.
2. Section 092216 "Non-Structural Metal Framing" for non-structural framing that supports gypsum board panels.

1.3 SUBMITTALS

A. Product Data: For each type of product.

1.4 DELIVERY, STORAGE AND HANDLING

A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.5 FIELD CONDITIONS

A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.

B. Do not install paper-faced gypsum panels until installation areas are enclosed and conditioned.

C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

2.2 GYPSUM BOARD, GENERAL

A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.

2.3 INTERIOR GYPSUM BOARD

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. CertainTeed Corp.
2. Georgia-Pacific Gypsum LLC.
3. Lafarge North America Inc.
4. National Gypsum Company.
5. Temple-Inland.
6. USG Corporation.

B. Gypsum Board, Type X: ASTM C 1396/C 1396M.

1. Thickness: 5/8 inch.
2. Long Edges: Tapered.

C. Gypsum Ceiling Board: ASTM C 1396/C 1396M.

1. Thickness: 1/2 inch.
2. Long Edges: Tapered.

2.4 TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or 1325, with manufacturer's standard edges.

1. Products: Subject to compliance with requirements, provide one of the following:

    a. CertainTeed Corp.; FiberCement Underlayment.
    b. Custom Building Products; Wonderboard.
    c. James Hardie Building Products, Inc.; Hardiebacker.
    d. National Gypsum Company, Permabase Cement Board.
    e. USG Corporation; DUROCK Cement Board.

2. Thickness: As indicated.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

2.5 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.
2. Shapes:

    a. Cornerbead.
    b. LC-Bead: J-shaped; exposed long flange receives joint compound.
    c. L-Bead: L-shaped; exposed long flange receives joint compound.

2.6 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.
2. Tile Backing Panels: As recommended by panel manufacturer.

C. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
3. Fill Coat: For second coat, use drying-type, all-purpose compound.
4. Finish Coat: For third coat, use drying-type, all-purpose compound.

D. Joint Compound for Tile Backing Panels:

1. Cementitious Backer Units: As recommended by backer unit manufacturer.

2.7 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

C. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

D. Acoustical Joint Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

1. Products: Subject to compliance with requirements, provide one of the following:

a. Accumetric LLC; BOSS 824 Acoustical Sound Sealant.
b. Grabber Construction Products; Acoustical Sealant GSC.
c. Pecora Corporation; AC-20 FTR.
d. Specified Technologies, Inc.; Smoke N Sound Acoustical Sealant.
e. USG Corporation; SHEETROCK Acoustical Sealant.

2.8 TEXTURE FINISHES

A. Primer: As recommended by textured finish manufacturer.

B. Aggregate Finish: Water-based, job-mixed, aggregated, drying-type texture finish for spray application.

1. Products: Subject to compliance with requirements, provide one of the following:

a. CertainTeed Corp.; ProRoc Wall and Ceiling Spray Texture.
b. Georgia-Pacific Gypsum LLC; ToughRock Ceiling Textures/Vermiculite.
c. USG Corporation; SHEETROCK Wall and Ceiling Spray Texture (Aggregated).

2. Texture: Spatter knock-down where indicated on Drawings. Other textures to match existing where indicated on Drawings.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.

C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.

D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.

E. Cover both faces of support framing with gypsum panels in concealed spaces (i.e. above ceilings).

1. Fit gypsum panels around ducts, pipes, and conduits.

F. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

G. Wood Framing: Install gypsum panels over wood framing, with floating internal corner construction. Do not attach gypsum panels across the flat grain of wide-dimension lumber, including floor joists and headers. Float gypsum panels over these members or provide control joints to counteract wood shrinkage.

H. STC-Rated Assemblies: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies.

I. Install sound attenuation blankets before installing gypsum panels unless blankets are readily installed after panels have been installed on one side.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Install interior gypsum board in the following locations:

1. Type X: Vertical surfaces unless otherwise indicated.
2. Ceiling Type: Ceiling surfaces.

B. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
2. On partitions/walls, apply gypsum panels vertically (parallel to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.

    a. Stagger abutting end joints not less than one framing member in alternate courses of panels.

3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 APPLYING TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A108.11, at showers and where indicated.

3.5 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

B. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.
2. LC-Bead: Use at exposed panel edges.
3. L-Bead: Use where indicated.

3.6 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints and damaged surface areas.

C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 1: Concealed areas, and where indicated.
2. Level 4: At panel surfaces that will be exposed to view.

    a. Primer and its application to surfaces are specified in Section 099123 "Interior Painting."

E. Cementitious Backer Units: Finish according to manufacturer's written instructions.

3.7 APPLYING TEXTURE FINISHES

A. Surface Preparation and Primer: Prepare and apply primer to gypsum panels and other surfaces receiving texture finishes. Apply primer to surfaces that are clean, dry, and smooth.

B. Texture Finish Application: Mix and apply finish using powered spray equipment, to produce a uniform texture free of starved spots or other evidence of thin application or of application patterns.

C. Prevent texture finishes from coming into contact with surfaces not indicated to receive texture finish by covering them with masking agents, polyethylene film, or other means. If, despite these precautions, texture finishes contact these surfaces, immediately remove droppings and overspray to prevent damage according to texture-finish manufacturer's written recommendations.

3.8 PROTECTION

A. Protect adjacent surfaces from drywall compound and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

B. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.

C. Remove and replace panels that are wet, moisture damaged, and mold damaged.

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

END OF SECTION 092900

SECTION 093000

TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Ceramic tile.
2. Waterproof membrane.

B. Related Requirements:

1. Section 079200 "Joint Sealants" for sealing of control and isolation joints in tile surfaces.

1.3 PERFORMANCE REQUIREMENTS

A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:

1. Level Surfaces: Minimum 0.60.

1.4 SUBMITTALS

A. Product Data: For each type of product indicated.

B. Samples for Verification:

1. Full-size units of each type and composition of tile and for each color and finish required.

C. Qualification Data: For qualified Installer.

D. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

E. Product Certificates: For each type of product, signed by product manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.

B. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.

C. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.

D. Store liquid materials in unopened containers and protected from freezing.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Provide tile complying with Standard grade requirements unless otherwise indicated.

B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCA installation methods specified in tile installation schedules, and other requirements specified.

C. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.

2.2 TILE PRODUCTS

A. Tile Type: Unglazed ceramic mosaic tile.

1. Basis of Design Manufacturer: American Olean. Product as indicted on Drawings.
2. Module Size: 2 by 2 inches.
3. Thickness: 1/4 inch.
4. Face: Plain, with cushion edges.
5. Tile Color and Pattern: Indicated on Drawings.
6. Grout Color: Indicated on Drawings.
7. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes selected from manufacturer's standard shapes:

2.3 WATERPROOF MEMBRANE

A. General: Manufacturer's standard product, selected from the following, that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.

B. Chlorinated Polyethylene Sheet: Nonplasticized, chlorinated polyethylene faced on both sides with nonwoven polyester fabric; 0.030-inch nominal thickness.

1. Product: Noble Company (The); Nobleseal TS.

C. PVC Sheet: Two layers of PVC sheet heat-fused together and to facings of nonwoven polyester; 0.040-inch nominal thickness.

1. Product: Compotite Corporation; Composeal Gold.

2.4 SETTING MATERIALS

A. Latex-Portland Cement Mortar (Thin Set): ANSI A118.4.

1. Basis-of-Design: MAPEI Corporation.
2. Provide prepackaged, dry-mortar mix containing dry, redispersible, vinyl acetate or acrylic additive to which only water must be added at Project site.

2.5 GROUT MATERIALS

A. Polymer-Modified Tile Grout: ANSI A118.7.

1. Basis-of-Design Product: MAPEI Corporation. Product indicated on Drawings.
2. Polymer Type: Ethylene vinyl acetate or acrylic additive, in dry, redispersible form, prepackaged with other dry ingredients.

2.6 MISCELLANEOUS MATERIALS

A. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

B. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.

1. Product: Indicated on Drawings.

2.7 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.

B. Add materials, water, and additives in accurate proportions.

C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.

1. Verify that substrates for setting tile are firm, dry, clean, free of coatings that are incompatible with tile-setting materials including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
2. Verify that concrete substrates for tile floors installed with thin-set mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.

    a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
    b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.

3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.

4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with thin-set mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

B. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 TILE INSTALLATION

A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.

1. For the following installations, follow procedures in the ANSI A108 Series of tile installation standards for providing 95 percent mortar coverage:

    a. Tile floors in wet areas.

B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.

C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.

D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.

E. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
   1. Where adjoining tiles on floor, base, or trim are specified or indicated to be same size, align joints.

F. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:

   1. Ceramic Mosaic Tile: 1/16 inch.

3.4 WATERPROOFING INSTALLATION

A. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.

B. Do not install tile or setting materials over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.5 CLEANING AND PROTECTING

A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

   1. Remove latex-portland cement grout residue from tile as soon as possible.
   2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

B. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.

C. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.

D. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.6 INTERIOR TILE INSTALLATION SCHEDULE

A. Interior Floor Installations, Concrete Subfloor:

1. Tile Installation F122: Thin-set mortar on waterproof membrane; TCA F122.

a. Thin-Set Mortar: Latex-portland cement mortar.
b. Grout: Polymer-modified sanded grout.

END OF SECTION 093000

SECTION 096513

RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Resilient base.
2. Resilient molding accessories.

1.3 SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Verification: For each type of product indicated and for each color, texture, and pattern required in manufacturer's standard-size Samples, but not less than 12 inches long.

C. Product Schedule: For resilient base and accessory products. Use same designations indicated on Drawings.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F.

1.5 FIELD CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive resilient products during the following time periods:

1. 48 hours before installation.

2. During installation.
3. 48 hours after installation.

B. Install resilient products after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 VINYL BASE

A. Basis of Design Manufacturer: Roppe Corporation, USA.

B. Product Standard: ASTM F 1861, Type TV (vinyl, thermoplastic).

1. Group: I (solid, homogeneous).
2. Style and Location:

a. Style B, Cove: Provide in areas with resilient flooring.

C. Minimum Thickness: 0.125 inch.

D. Height: 4 inches.

E. Lengths: Coils in manufacturer's standard length.

F. Outside Corners: Job formed.

G. Inside Corners: Job formed.

H. Colors and Patterns: Refer to Drawings.

2.2 VINYL MOLDING ACCESSORY

A. Basis of Design Manufacturer: Roppe Corporation, USA.

B. Description: Vinyl transition strips.

C. Profile and Dimensions: As indicated.

D. Locations: Provide vinyl molding accessories in areas indicated.

E. Colors and Patterns: Refer to Drawings.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Installation of resilient products indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

B. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

C. Do not install resilient products until they are the same temperature as the space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.

D. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient products.

3.3 RESILIENT BASE INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient base.

B. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

C. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.

D. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.

E. Do not stretch resilient base during installation.

F. Job-Formed Corners:

1. Outside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.

    a. Form without producing discoloration (whitening) at bends.

2. Inside Corners: Use straight pieces of maximum lengths possible and form with returns not less than 3 inches in length.

    a. Miter corners to minimize open joints.

3.4 RESILIENT ACCESSORY INSTALLATION

A. Comply with manufacturer's written instructions for installing resilient accessories.

B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

3.5 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

B. Perform the following operations immediately after completing resilient-product installation:

1. Remove adhesive and other blemishes from exposed surfaces.

C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Cover resilient products subject to wear and foot traffic until Substantial Completion.

END OF SECTION 096513

SECTION 096519

RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Vinyl floor tile.

1.3 SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Verification: Full-size units of each color and pattern of floor tile required.

C. Product Schedule: For floor tile. Use same designations indicated on Drawings.

D. Qualification Data: For Installer.

E. Maintenance Data: For each type of floor tile to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: A qualified installer who employs workers for this Project who are competent in techniques required by manufacturer for floor tile installation and seaming method indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store floor tile and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store floor tiles on flat surfaces.

1.6 FIELD CONDITIONS

A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F, in spaces to receive floor tile during the following time periods:

1. 48 hours before installation.
2. During installation.
3. 48 hours after installation.

B. Close spaces to traffic during floor tile installation.

C. Close spaces to traffic for 48 hours after floor tile installation.

D. Install floor tile after other finishing operations, including painting, have been completed.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

2.2 VINYL FLOOR TILE

A. Vinyl Plank Flooring: Polymerized vinyl wearlayer with high strength vinyl backing. 4 inches wide by 36 inches by 1/8 inch thick. Minimum 24 mils thick wearlayer. Slip resistance greater than 0.60 according to ASTM C 1028.

1. Product/Manufacturer: Refer to Drawings.

B. Vinyl Tile Flooring: Vinyl composition tile, non-directional thru pattern construction; ISO 10595, type II, 12 inches x 12 inches x 1/8 inch thick.

1. Product/Manufacturer: Refer to Drawings.

C. Colors and Patterns: Refer to Drawings.

2.3 INSTALLATION MATERIALS

A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.

B. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor tile.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.

B. Concrete Substrates: Prepare according to ASTM F 710.

1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
2. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.
3. Alkalinity and Adhesion Testing: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 10 pH.
4. Moisture Testing: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations.

C. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

D. Do not install floor tiles until they are the same temperature as the space where they are to be installed.

1. At least 48 hours in advance of installation, move resilient floor tile and installation materials into spaces where they will be installed.

E. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

3.3 FLOOR TILE INSTALLATION

A. Comply with manufacturer's written instructions for installing floor tile.

B. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

C. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles.

D. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.

E. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.

F. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

3.4 CLEANING AND PROTECTION

A. Comply with manufacturer's written instructions for cleaning and protecting floor tile.

B. Perform the following operations immediately after completing floor tile installation:

1. Remove adhesive and other blemishes from exposed surfaces.
2. Sweep and vacuum surfaces thoroughly.
3. Damp-mop surfaces to remove marks and soil.

C. Protect floor tile from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.

D. Cover floor tile until Substantial Completion.

END OF SECTION 096519

SECTION 099123

INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following interior substrates:

1. Wood.
2. Gypsum board.

1.3 DEFINITIONS

A. Gloss Level 4 (Satin): 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

1.4 SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.

1. Submit Samples on rigid backing, 8 inches square.
2. Step coats on Samples to show each coat required for system.
3. Label each coat of each Sample.
4. Label each Sample for location and application area.

C. Product List: For each product indicated, include the following:

1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.6 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Manufacturer: Devoe Paint (an Akzo Nobel Company). Other acceptable manufacturers:

1. Benjamin Moore & Co.
2. Comex Group.
3. Sherwin-Williams Company (The).

2.2 PAINT, GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."

B. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. Colors: As indicated on Drawings.

2.3 PRIMERS/SEALERS

A. Primer Sealer, Latex, Interior: MPI #50.

1. Devoe Paint; Paint High Hiding Primer/Sealer.

B. Primer, Latex, for Interior Wood: MPI #39.

Devoe Paint; Primz220 Kilstain WB Int/Ext Latex All Purpose Stain Killer/Primer/Sealer.

2.4 WATER-BASED PAINTS

A. Latex, Interior, (Gloss Level 4): MPI #43.

1. Devoe Paint; Regency Interior Satin Paint.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Wood: 15 percent.
2. Gypsum Board: 12 percent.

C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

E. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Wood Substrates:

1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
2. Sand surfaces that will be exposed to view, and dust off.
3. Prime edges, ends, faces, undersides, and backsides of wood.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.5 INTERIOR PAINTING SCHEDULE

A. Wood Substrates: Including wood trim.

1. Latex System:

a. Prime Coat: Primer, latex, for interior wood, MPI #39.
b. Intermediate Coat: Latex, interior, matching topcoat.
c. Topcoat: Latex, interior, (Gloss Level 4), MPI #43.

B. Gypsum Board Substrates:

1. Latex System:

a. Prime Coat: Primer sealer, latex, interior, MPI #50.
b. Prime Coat: Latex, interior, matching topcoat.
c. Intermediate Coat: Latex, interior, matching topcoat.
d. Topcoat: Latex, interior, (Gloss Level 4), MPI #43.

END OF SECTION 099123

DIVISION 10 - SPECIALTIES

SECTION 101400

IDENTIFYING DEVICES

PART I - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Room name signs.

1.03 QUALITY ASSURANCE

A. Comply with Americans With Disabilities Act.

1.04 SUBMITTALS

A. General: Comply with Section 013300 “Submittals.”

B. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

C. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

D. Submit samples.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Product: ADA Tactile Sign Series - 8" x 8" raised letters and characters on acrylic plastic background with acrylic plastic frame. A white-on-black pictograms, Text and Braille shall be provided.

B. Provide the following signs:

1. House Number Sign, Tactile text and Braille, model # ADA 1030. Provide one sign for each unit.

C. House numbers to be raised characters and braille. Numbers to be raised 1/32”, upper case, Sans Serif or Simple Serif Type and with Grade 2 braille.

D. Finish and Contrast: Numbers and background of signs to be eggshell, matte, or other non-glare finish. Numbers and braille to contrast with their background with either light numbers on a dark background or dark numbers on a light background.

E. Number Proportions: Numbers on the signs shall have a width-to-height ratio between 3:5 and 1:1 and a stroke-width-to-height ratio 1:5 and 1:10.

F. The signs shall be raised numbers and characters on a 1/16” acrylic plastic background. Matte white finish letter and numbers on a dark bronze or black background with rounded corners. Black acrylic plastic frame ½ “ thick with rounded corners.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Signs installed at the front entry doors of each unit. Verify exact location with architect and owner.

B. Mounting Location and Height: Install signs on wall adjacent to the latch side of the door. Mounting height to be 60 in. above finished floor to the centerline of the sign.

C. Install plumb and level in selected locations with double-side adhesive tape in accordance with manufacturer's recommendations.

- END OF SECTION -

SECTION 102813

TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes private-use bathroom accessories.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:

1. Construction details and dimensions.
2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Material and finish descriptions.
4. Features that will be included for Project.
5. Manufacturer's warranty.

B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required.

1. Identify locations using room designations indicated.
2. Identify products using designations indicated.

C. Warranty: Sample of special warranty.

D. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.4 QUALITY ASSURANCE

A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.

1.5 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.

B. Deliver inserts and anchoring devices set into concrete or masonry as required to prevent delaying the Work.

1.6 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch minimum nominal thickness unless otherwise indicated.

B. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch minimum nominal thickness.

C. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 hot-dip zinc coating.

D. Galvanized-Steel Mounting Devices: ASTM A 153/A 153M, hot-dip galvanized after fabrication.

E. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

F. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

G. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.

2.2 PRIVATE-USE BATHROOM ACCESSORIES

A. Basis of Design Products: Refer to Drawings.

2.3 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Equip units for concealed anchorage and with corrosion-resistant backing plates.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 102800

SECTION 105623

WIRE STORAGE SHELVING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following types of shelving:

1. Vinyl-coated ventilated shelving.
2. Shelving accessories.

1.3 SUBMITTALS

A. Product Data: Manufacturer’s technical data, including specifications and installation instructions.

B. Shop Drawings: Submit complete shop drawings. Show dimensions of shelving and interface with other products based on field verified dimensions.

1.4 PROJECT CONDITIONS

A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting. Show recorded measurements on approved shop drawings. Coordinate fabrication schedule with construction progress to avoid delay.

1.5 DELIVERY, STORAGE AND HANDLING

A. Deliver all materials to the Project site in their original unbroken containers bearing manufacturer’s name, brand and specification designation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design Manufacturer: ClosetMaid (Clairson International).

2.2 MATERIALS

A. Steel Wire: Basic cold drawn, Grade C-1006; average tensile strength over 100,000 psi; coated.

B. Wire Coating: Proprietary heavy-duty polyvinyl chloride (PVC) formula resin, plasticizers, stabilizers, pigments, and other additives.

1. Thickness: 9 to 11 mils.

2.3 FABRICATED UNITS

A. Wire Shelving: Coated steel wire, 1/2 inch to 1 inch incremental cross-deck spacings. Applications, lengths, and depths as indicated on Drawings.

B. Accessories: Manufacturer’s standard components as follows and to suit installation requirements:

1. Wall Clips.
2. End Brackets.
3. Support Brackets.
4. Poles.
5. Standards.
6. Shelf Brackets.
7. Pole Clips.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions under which installation is to be performed.

B. Verification of Conditions:

1. Prepared spaces are sized and located in accordance with approved shop drawings.
2. Framing, reinforcement, and anchoring devices are correct type and are located in accordance with approved shop drawings.

3.2 INSTALLATION

A. General: At a minimum, brace/secure shelf supports to three (3) or more stud locations, spaced maximum 4 feet o.c.

B. Cut shelves 1/2 inch to 1-3/8 inches shorter than actual measurements; cap all exposed ends.

C. Install shelving plumb and level at heights indicated in accordance with approved shop drawings and manufactured published installation instructions.

D. Place wall clips 10 inches to 12 inches on level line.

E. Install end brackets on same level line as wall clips, centered on the front rods of shelves. Support shelves 36 inches maximum with end brackets, support brackets, or poles.

F. Drill holes where required using sharp bit; do not punch.

G. Drywall: Drill 1/4 inch hole and insert wall clip. Use No. 8 pin to expand anchor.

H. Wood: Drill 1/4 inch hole into wood, secure wall clip with No. 8 x 1 inch screw or secure pole clip directly to wood with No. 8 x 1-1/4 inch screws.

I. Concrete: Drill 1/4 inch hole with masonry bit, insert wall clip, and secure with No. 8 x 1 inch screws.

J. Standards and Brackets:

1. Install standards vertically every 16 inches on studs.
2. Install horizontal tracks level, secured with screws or mollies in studs or drywall; use hanging adapters to connect wall standards for hanging.
3. Attach shelf brackets with manufacturer’s standard components.

K. Shelf Supports:

1. Place shelf support brackets vertically to the shelf. Attach with wall anchors.
2. Install down clips or cable clips with 1/4 inch anchor on the back rod behind every support bracket.
3. 36 inches o.c. maximum or 24 inches o.c. maximum to suit installation conditions.

L. Attach pole clips at same elevations as wall clips for a given shelf; use with poles as recommended by manufacturer.

M. Use corner support brackets on all corner “butt” joints.

N. For wall to wall installation, use end bracket; drill 1/4 inch holes, and secure with No. 8 pins.

3.3 CLEANING

A. Upon completion of installation, clean all surfaces that have become soiled during installation.

END OF SECTION 105623

DIVISION 12 - FURNISHINGS

SECTION 122113

HORIZONTAL LOUVER BLINDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Horizontal louver blinds with faux wood polymer slats.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood blocking and grounds for mounting horizontal louver blinds and accessories.

1.3 SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Verification: For each type and color of horizontal louver blind indicated.

1. Slat: Not less than 12 inches long.

C. Product Test Reports: For each type of horizontal louver blind, for tests performed by a qualified testing agency.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For horizontal louver blinds to include in maintenance manuals.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver horizontal louver blinds in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.

1.6 FIELD CONDITIONS

A. Environmental Limitations: Do not install horizontal louver blinds until construction and wet and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where horizontal louver blinds are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 HORIZONTAL LOUVER BLINDS, POLYMER SLATS

A. Basis-of-Design Manufacturer: Home Decorators Collection. Product indicated on Drawings.

B. Flame-Resistance Rating: Comply with NFPA 701; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

C. Slats: Polymers that are lead free, UV stabilized, integrally colored, opaque, and will not crack or yellow; antistatic, dust-repellent treated.

1. Formulation: Manufacturer's standard.
2. Width: 2-1/2 inches.
3. Thickness: 0.125 inch.
4. Spacing: Manufacturer's standard.
5. Profile: Manufacturer's standard.

D. Headrail: Formed steel or extruded aluminum; long edges returned or rolled. Headrail fully encloses operating mechanisms on three sides and ends.

1. Capacity: One blind per headrail unless otherwise indicated.
2. Manual Lift Mechanism:

    a. Lift-Cord Lock: Variable; stops lift cord at user-selected position within full operating range.
    b. Operator: Extension of lift cord(s) through lift-cord lock mechanism to form cord pull.

3. Manual Lift-Operator and Tilt-Operator Lengths: Manufacturer's standard.
4. Manual Lift-Operator and Tilt-Operator Locations: Manufacturer's standard unless otherwise indicated.

E. Bottom Rail: Secures and protects ends of ladders and lift cords.

1. Type: Manufacturers standard.

F. Lift Cord: Manufacturer's standard braided cord.

G. Ladders: Evenly spaced across headrail at spacing that prevents long-term slat sag.

1. Type: Braided cord.

H. Valance: Manufacturer's standard.

I. Mounting Brackets: With spacers and shims required for blind placement and alignment indicated.

1. Type: Wall.
2. Intermediate Support: Provide intermediate support brackets to produce support spacing recommended by blind manufacturer for weight and size of blind.

J. Colors, Textures, Patterns, and Gloss: Indicated on Drawings.

2.2 HORIZONTAL LOUVER BLIND FABRICATION

A. Product Safety Standard: Fabricate horizontal louver blinds to comply with WCMA A 100.1 including requirements for corded, flexible, looped devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F:

1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which blind is installed less 1/4 inch per side or 1/2 inch total, plus or minus 1/8 inch. Length equal to head-to-sill dimension of opening in which blind is installed less 1/4 inch, plus or minus 1/8 inch.

C. Concealed Components: Noncorrodible or corrosion-resistant-coated materials.

1. Lift-and-Tilt Mechanisms: With permanently lubricated moving parts.

D. Mounting and Intermediate Brackets: Designed for removal and reinstallation of blind without damaging blind and adjacent surfaces, for supporting blind components, and for bracket positions and blind placement indicated.

E. Installation Fasteners: No fewer than two fasteners per bracket, fabricated from metal noncorrosive to brackets and adjoining construction; type designed for securing to supporting substrate; and supporting blinds and accessories under conditions of normal use.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, and other conditions affecting performance.

1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install horizontal louver blinds level and plumb, aligned and centered on openings, and aligned with adjacent units according to manufacturer's written instructions.

1. Locate so exterior slat edges are not closer than 1 inch from interior faces of glass and not closer than 1/2 inch from interior faces of glazing frames through full operating ranges of blinds.
2. Install mounting and intermediate brackets to prevent deflection of headrails.
3. Install with clearances that prevent interference with adjacent blinds, adjacent construction, and operating hardware of glazed openings, other window treatments, and similar building components and furnishings.

3.3 ADJUSTING

A. Adjust horizontal louver blinds to operate free of binding or malfunction through full operating ranges.

3.4 CLEANING AND PROTECTION

A. Clean horizontal louver blind surfaces after installation according to manufacturer's written instructions.

B. Provide final protection and maintain conditions in a manner acceptable to manufacturer and Installer and that ensures that horizontal louver blinds are without damage or deterioration at time of Substantial Completion.

C. Replace damaged horizontal louver blinds that cannot be repaired in a manner approved by Architect before time of Substantial Completion.

END OF SECTION 122113

SECTION 123530

RESIDENTIAL CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes kitchen and vanity cabinets.

B. Related Requirements:

1. Section 123640 "Stone Countertops."
2. Section 123661 "Simulated Stone Countertops."
3. Section 220500 “Plumbing” Plumbing fixtures, under counter mounted sink units.

1.3 SUBMITTALS

A. Product Data: For the following:

1. Cabinets.
2. Cabinet hardware.

B. Shop Drawings: Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, and hardware.

C. Samples for Verification: 8-by-10-inch Samples for each type of finish.

D. Product Certificates: For casework.

1.4 FIELD CONDITIONS

A. Environmental Limitations: Do not deliver or install casework until building is enclosed, wet work is complete and dry, and temporary HVAC system is operating and maintaining temperature and humidity conditions at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes to allow for trimming and fitting.

1.5 COORDINATION

A. Coordinate layout and installation of blocking and reinforcement in partitions for support of casework.

PART 2 - PRODUCTS

2.1 CABINETS

A. Basis of Design: American Woodmark Corporation

B. Other acceptable manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. All Wood Cabinetry, LLC.
2. Avon Cabinet Corp.
3. Bishop, Jim Cabinets, Inc.
4. Carbide Industries, LLC.
5. Cheaha Cabinets, LLC.
6. Evans Cabinet Corporation.
7. KraftMaid Cabinetry, Inc.
8. Legacy Cabinets Inc.
9. Lusara Cucine, Inc.
10. Merillat Industries, LLC.
11. Mid-America Cabinets.
12. Regal Kitchens, LLC.
13. Southern Stone Cabinets, Inc.
14. Tru-Wood Cabinets, Inc.
15. Wellborn Cabinet, Inc.

C. Quality Standard: Provide cabinets that comply with KCMA A161.1 and HUD Severe Use requirements.

1. KCMA Certification: Provide cabinets with KCMA's "Certified Cabinet" seal affixed in a semiexposed location of each unit and showing compliance with the above standard.

D. Face Style: Reveal overlay; door and drawer faces partially cover cabinet fronts.

E. Cabinet Style: Face frame.

F. Door and Drawer Fronts: 3/4-inch- thick, veneer-faced plywood.

G. Face Frames: 3/4-by-1-5/8-inch solid wood with glued mortise and tenon or doweled joints.

H. Exposed Cabinet End Finish: Wood veneer.

I. Cabinet End Construction: 1/2-inch thick plywood.

J. Cabinet Tops and Bottoms: 1/2-inch thick plywood, fully supported by and secured in rabbets in end panels, front frame, and back rail.

K. Back, Top, and Bottom Rails: 3/4-by-2-1/2-inch solid wood, interlocking with end panels and rabbeted to receive top and bottom panels. Back rails secured under pressure with glue and with mechanical fasteners.

L. Wall-Hung-Unit Back Panels: 3/16-inch- thick plywood fastened to rear edge of end panels and to top and bottom rails.

M. Base-Unit Back Panels: 3/16-inch thick plywood fastened to rear edge of end panels and to top and bottom rails.

N. Front Frame Drawer Rails: 3/4-by-1-1/4-inch solid wood mortised and fastened into face frame.

O. Drawers: Fabricate with exposed fronts fastened to subfront with mounting screws from interior of body.

1. Join subfronts, backs, and sides with glued rabbeted joints supplemented by mechanical fasteners.
2. Subfronts, Backs, and Sides: 3/4-inch thick solid wood.
3. Bottoms: 1/4-inch thick plywood.

P. Shelves: 5/8-inch thick plywood.

Q. Joinery: Rabbet backs flush into end panels and secure with concealed mechanical fasteners. Connect tops and bottoms of wall cabinets and bottoms and stretchers of base cabinets to ends and dividers with mechanical fasteners. Rabbet tops, bottoms, and backs into end panels.

R. Factory Finishing: Finish cabinets at factory. Defer only final touchup until after installation.

2.2 CABINET MATERIALS

A. General:

1. Hardwood Lumber: Kiln dried to 7 percent moisture content.

2. Softwood Lumber: Kiln dried to 10 percent moisture content.
3. Hardwood Plywood: HPVA HP-1; made with adhesive containing no urea formaldehyde.

B. Exposed Materials:

1. Exposed Wood Species: Maple.

a. Select materials for compatible color and grain. Do not use two adjacent exposed surfaces that are noticeably dissimilar in color, grain, figure, or natural character markings.
b. Staining and Finish: As selected by Architect from manufacturer's full range.

2. Solid Wood: Clear hardwood lumber of species indicated, free of defects.
3. Plywood: Hardwood plywood with face veneer of species indicated, with Grade A faces and Grade C backs of same species as faces.

a. Edge band exposed edges with a minimum of 1/8-inch thick, solid-wood edging of same species as face veneer.

C. Semiexposed Materials: Unless otherwise indicated, provide the following:

1. Solid Wood: Sound hardwood lumber, selected to eliminate appearance defects. Same species as exposed surfaces.
2. Plywood: Hardwood plywood with Grade C faces and not less than Grade 3 backs of same species as faces. Face veneers of same species as exposed surfaces.

D. Concealed Materials: Solid wood or plywood, of any hardwood or softwood species, with no defects affecting strength or utility.

2.3 CABINET HARDWARE

A. General: Manufacturer's standard units complying with BHMA A156.9, of type, size, style, material, and finish as selected by Architect from manufacturer's full range.

B. Pulls: Wire pulls. Product as indicated on Drawings.

C. Hinges: Semiconcealed (wraparound) butt hinges for overlay doors.

D. Drawer Guides: Epoxy-coated-metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05011 or Type B05091. 75 lbs. load rated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of framing and reinforcements, and other conditions affecting performance of casework.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install cabinets with no variations in flushness of adjoining surfaces; use concealed shims. Where cabinets abut other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match cabinet face.

B. Install cabinets without distortion so doors and drawers fit the openings, are aligned, and are uniformly spaced. Complete installation of hardware and accessories as indicated.

C. Install cabinets level and plumb to a tolerance of 1/8 inch in 8 feet.

D. Fasten cabinets to adjacent units and to backing.

1. Fasten wall cabinets through back, near top and bottom, and at ends not more than 16 inches o.c. with No. 10 wafer-head screws sized for not less than 1-1/2-inch penetration into wood framing, blocking, or hanging strips and No. 10 wafer-head sheet metal screws through the metal backing or metal framing behind the wall finish.

3.3 ADJUSTING AND CLEANING

A. Adjust cabinets and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

B. Clean casework on exposed and semiexposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

END OF SECTION 123530

SECTION 123640

STONE COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes stone countertops.

B. Related Requirements:

1. Section 123661 "Simulated Stone Countertops" for solid-surface countertops.

1.3 SUBMITTALS

A. Product Data: For each variety of stone, stone accessory, and manufactured product.

B. Shop Drawings: Include plans, sections, details, and attachments to other work.

1. Show locations and details of joints.
2. Show direction of veining, grain, or other directional pattern.

C. Samples for Verification:

1. For each stone type indicated, in sets of Samples not less than 12 inches square. Include two or more Samples in each set and show the full range of variations in appearance characteristics expected in completed Work.

D. Maintenance Data: For stone countertops to include in maintenance manuals. Include product data for stone-care products used or recommended by Installer, and names, addresses, and telephone numbers of local sources for products.

1.4 QUALITY ASSURANCE

A. Fabricator Qualifications: Skilled workers who custom fabricate stone countertops similar to work on this project.

B. Source Limitations for stone:

1. Obtain each variety of stone from a single quarry.

2. Make stone slabs available for architect to examine for appearance characteristics.

C. Build mock-up to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mock-up of typical countertop as shown on drawings.

2. Approved mock-up may become part of the completed work.

1.5 FIELD CONDITIONS

A. Field Measurements: Verify dimensions of construction to receive stone countertops by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 GRANITE

A. Material Standard: Comply with ASTM C 615.

B. Granite Variety, Cut, and Finish: As indicated on Drawings.

C. Cut stone from one block or contiguous matched blocks in which natural markings occur.

2.2 ADHESIVES, GROUT, SEALANTS, AND STONE ACCESSORIES

A. General: Use only adhesives formulated for stone and ceramic tile and that are recommended by their manufacturer for the application indicated.

B. Water-Cleanable Epoxy Adhesive: ANSI A118.3.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Bostik, Inc.
b. C-Cure.
c. Custom Building Products.
d. Jamo Inc.
e. Laticrete International, Inc.
f. MAPEI Corporation.
g. TEC, Specialty Construction Brands, Inc.

C. Sealant for Countertops: Manufacturer's standard sealant of characteristics indicated below that complies with applicable requirements in Section 079200 "Joint Sealants" and will not stain the stone it is applied to.

1. Mildew-Resistant Joint Sealant: Single component, nonsag, mildew resistant, acid curing, silicone.
2. Color: As selected by Architect from manufacturer's full range.

D. Stone Sealer: Colorless, stain-resistant sealer that does not affect color or physical properties of stone surfaces, as recommended by stone producer for application indicated.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Bostik, Inc.
b. Custom Building Products.
c. Hillyard, Inc.
d. HMK Stone Care System.

2.3 STONE FABRICATION, GENERAL

A. Select stone for intended use to prevent fabricated units from containing cracks, seams, and starts that could impair structural integrity or function.

B. Fabricate stone countertops in sizes and shapes required to comply with requirements indicated.

1. For granite, comply with recommendations in NBGQA's "Specifications for Architectural Granite."
2. Clean sawed backs of stones to remove rust stains and iron particles.
3. Dress joints straight and at right angle to face unless otherwise indicated.
4. Cut and drill sinkages and holes in stone for anchors, supports, and attachments.
5. Provide openings, reveals, and similar features as needed to accommodate adjacent work.
6. Fabricate molded edges with machines having abrasive shaping wheels made to reverse contour of edge profile to produce uniform shape throughout entire length of edge and with precisely formed arris slightly eased to prevent snipping, and matched at joints between units. Form corners of molded edges as indicated with outside corners slightly eased unless otherwise indicated.
7. Finish exposed faces of stone to comply with requirements indicated for finish of each stone type required and to match approved samples. Provide matching finish on exposed edges of countertops, splashes, and cutouts.

C. Grade and mark stone for final locations to produce assembled countertops with an overall uniform appearance.

D. Carefully inspect finished stone units at fabrication plant for compliance with requirements for appearance, material, and fabrication. Replace defective units.

2.4 STONE COUNTERTOPS

A. General: Comply with recommendations in MIA's "Dimension Stone - Design Manual Version 7.2."

B. Nominal Thickness: Provide thickness indicated. Gage backs to provide units of identical thickness.

C. Edge Detail: As indicated.

D. Splashes: Provide backsplashes and end splashes as indicated.

1. Height: Refer to drawings.
2. Top-Edge Detail: As indicated.

E. Joints: Fabricate countertops without joints. If field jointing is required, at locations indicated, use the bonded joint method with 1/32 inch maximum joint width.

F. Cutouts and Holes:

1. Counter-Mounted Fixtures: Prepare countertops in shop for field cutting openings for counter-mounted fixtures. Mark tops for cutouts and drill holes at corners of cutout locations. Make corner holes of largest radius practical.
2. Fittings: Drill countertops in shop for plumbing fittings and similar items.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates to receive stone countertops and conditions under which stone countertops will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of stone countertops.

B. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of stone countertops.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Before installing stone countertops, clean dirty or stained stone surfaces by removing soil, stains, and foreign materials. Clean stone by thoroughly scrubbing with fiber

brushes and then drenching with clear water. Use only mild cleaning compounds that contain no caustic or harsh materials or abrasives. Allow stone to dry before installing.

3.3 CONSTRUCTION TOLERANCES

A. Variation from Level: Do not exceed 1/8 inch in 96 inches, 1/4 inch maximum.

B. Variation in Joint Width: Do not vary joint thickness more than one-fourth of nominal joint width.

C. Variation in Plane at Joints (Lipping): Do not exceed 1/64-inch difference between planes of adjacent units.

D. Variation in Line of Edge at Joints (Lipping): Do not exceed 1/64-inch difference between edges of adjacent units, where edge line continues across joint.

3.4 INSTALLATION OF COUNTERTOPS

A. General: Install countertops over plywood subtops with full spread of water-cleanable epoxy adhesive.

B. Do not cut stone in field unless otherwise indicated. If stone countertops or splashes require additional fabrication not specified to be performed at Project site, return to fabrication shop for adjustment.

C. Set stone to comply with requirements indicated. Shim and adjust stone to locations indicated, with uniform joints of widths indicated and with edges and faces aligned according to established relationships and indicated tolerances.

D. Bond joints with stone adhesive and draw tight as countertops are set. Mask areas of countertops adjacent to joints to prevent adhesive smears.

E. Space joints with 1/16-inch gap for filling with sealant. Use temporary shims to ensure uniform spacing.

F. Install backsplashes and end splashes by adhering to wall with water-cleanable epoxy adhesive. Leave 1/16-inch gap between countertop and splashes for filling with sealant. Use temporary shims to ensure uniform spacing.

G. Apply sealant to gaps specified for filling with sealant; comply with Section 079200 "Joint Sealants." Remove temporary shims before applying sealant.

3.5 ADJUSTING AND CLEANING

A. In-Progress Cleaning: Clean countertops as work progresses. Remove adhesive, grout, mortar, and sealant smears immediately.

B. Remove and replace stone countertops of the following description:

1. Broken, chipped, stained, or otherwise damaged stone. Stone may be repaired if methods and results are approved by Architect.
2. Defective countertops.
3. Defective joints, including misaligned joints.
4. Interior stone countertops and joints not matching approved Samples and mockups.
5. Interior stone countertops not complying with other requirements indicated.

C. Replace in a manner that results in stone countertops matching approved Samples and mockups, complying with other requirements, and showing no evidence of replacement.

D. Clean stone countertops no fewer than six days after completion of sealant installation, using clean water and soft rags. Do not use wire brushes, acid-type cleaning agents, cleaning compounds with caustic or harsh fillers, or other materials or methods that could damage stone.

E. Sealer Application: Apply stone sealer to comply with stone producer's and sealer manufacturer's written instructions.

END OF SECTION 123640

SECTION 123661

SIMULATED STONE COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Solid-surface-material countertops and backsplashes.

B. Related Requirements:

1. Section 123640 "Stone Countertops."

1.3 SUBMITTALS

A. Product Data: For countertop materials.

B. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.

C. Samples for Verification: For the following products:

1. Countertop material, 6 inches square.

1.4 PROJECT CONDITIONS

A. Field Measurements: Verify dimensions of countertops by field measurements before countertop fabrication is complete.

1.5 COORDINATION

A. Coordinate locations of utilities that will penetrate countertops or backsplashes.

PART 2 - PRODUCTS

2.1 SOLID-SURFACE-MATERIAL COUNTERTOPS

A. Configuration: Provide countertops with the following front and backsplash style:

1. Front: Straight, slightly eased at top.
2. Backsplash: Straight, slightly eased at corner.
3. Endsplash: Matching backsplash.

B. Countertops: 1/2-inch thick, solid surface material with front edge built up with same material.

C. Backsplashes: 1/2-inch thick, solid surface material.

D. Fabrication: Fabricate tops in one piece with shop-applied edges and backsplashes unless otherwise indicated. Comply with solid-surface-material manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.

1. Fabricate with loose backsplashes for field assembly.

2.2 COUNTERTOP MATERIALS

A. Plywood Subtops: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded.

B. Adhesives: Adhesives shall not contain urea formaldehyde.

C. Solid Surface Material: Homogeneous solid sheets of filled plastic resin complying with ANSI SS1.

1. Basis of Design: “Swanstone”; The Swan Corporation. Other acceptable manufacturers:

a. Avonite Surfaces.
b. E. I. du Pont de Nemours and Company.
c. Formica Corporation.
d. Wilsonart International.

2. Colors and Patterns: As indicated on Drawings.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install countertops level to a tolerance of 1/8 inch in 8 feet.

B. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Pre-drill holes for screws as recommended by manufacturer. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

1. Install backsplashes and endsplashes to comply with manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.

END OF SECTION 123661

DIVISION 22 - PLUMBING

SECTION 220500

PLUMBING

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. The Scope of Work shall include the plumbing as indicated on the drawings.

1.03 SUBMITTALS (IF APPLICABLE)

A. General: Comply with Section 013300 “Submittals.”

B. Product Data: Submit plumbing for approval.

C. Submit any field modifications to clear Project site conditions.

1.04 QUALITY ASSURANCE (IF APPLICABLE)

A. Underwriters Laboratories approval shall apply to the unit.

B. The Supplementary General Conditions For Mechanical Work (Section 15000) apply to the work in this Section of the plumbing specifications.

C. PLUMBING MATERIALS AND INSTALLATION shall comply with Florida State Board of Health Sanitary Code, Chapter 17C, entitles "Plumbing", as well as codes noted in the Supplementary General Conditions for Mechanical Work.

PART 2 – PRODUCTS (IF APPLICABLE)

2.01 FIXTURES (IF APPLICABLE)

A. The work shall be provided as shown on the plan. All fixtures shall be "first quality" as defined and set forth in Commercial Standard CS-36 as promulgated by the United States Department of Commerce. (If applicable) Fixtures shall be by American Standard, Eljer or Kohler.

1. Fixtures shall all be from one manufacturer, and be of similar character in any one room or location.

2. Fixtures shall be vitreous china.

3. The color of the fixtures shall specified on the plan. Verify all special colors with the Architect prior to ordering.

B. Trim for fixtures shall be provided as shown on the plan.

1. Trim (faucets, handles, seats, etc.) shall all be from one manufacturer and be of similar character in any one room or location.

2. All exposed metal, not otherwise specified, shall be polished chrome on either brass or bronze.

2.02 PIPES AND FITTINGS (IF APPLICABLE)

A. PIPE AND FITTINGS shall be as shown on the plans.

1. Sanitary, Waste and Vent Piping shall be Schedule 40 PVC per ASTM-2665, with solvent welded sanitary fittings.

2. Domestic Hot and Cold Water Piping 2" AND SMALLER shall be Type L, hard-drawn copper tubing per ASTM Specification B-88. Fittings shall be sweat type, wrought copper.

B. Pipe insulation shall be provided as shown on the plan.

C. PIPING SPECIALTIES shall be located as shown on the plan, as required by code, and as required to provide a complete working system.

1. Water Hammer Arresters shall be provided at each fixture with a quick closing valve or flush valve. Fixtures in a battery shall be served by one arrester placed at the end of a full-sized header, in lieu of an arrester at each fixture. Arresters shall be stainless steel, bellows type, equal to J. R. Smith 5000 Series and sized in accordance with manufacturers' fixture unit rating.

2. Unions or Flanges shall be located at all connections to fixtures or equipment, which are serviceable or replaceable.

3. Dielectric Unions shall be provided at all connections between dissimilar metal piping materials, i.e., copper and ferrous piping. Unions shall be Epco, Capital or equal.

4. Traps shall be provided as shown on the plan and as required by code. Traps for lavatories and sinks shall be chrome-plated brass.

5. Trap Primers shall be as required by code.

6. Pipe Hangers shall be split ring type, galvanized with threaded rod support form structure above by Grinnell or equal. Provide a sheet metal saddle between the support and the insulation on any insulated piping.

Bare copper pipe	Grinnell 97CP
Other piping, 2" and smaller	Grinnell 104
Other piping, 2-1/2" and larger	Grinnell 260

7. Sleeves shall be provided in concrete forms prior to pouring of the concrete. Sleeves shall be galvanized Schedule 40 pipe or 14-gauge sheet metal. Where pipe is insulated, provide clearance for insulation at all penetrations of non-fire rated walls/floors. Where a wall/floor is fire rated, the insulation shall not continue through the sleeve. All penetrations of fire rated walls/floors shall be fire stopped with material as approved by the Building Official and Fire Marshal.

8. Pipe Clamp Supports shall be provided at all piping penetrations of floors in unfinished areas (equipment rooms, etc.).

9. Escutcheons shall be provided at all piping penetrations through an exposed wall, floor or ceiling. Escutcheons for flush sleeves shall be chrome plated brass equal to Beaton & Caldwell #3A. Escutcheons for sleeves, which extend beyond the wall or floor, shall be Beaton & Caldwell #36 or equal.

10. Corrosion protection shall be provided on copper tubing, which is underground, or in masonry or concrete walls. Protection shall be either a heavy coating of coal tar varnish or a full length PVC enclosure.

11. Roof Flashing shall be furnished for all vents through the roof. Flashing shall be 4 pounds per square foot lead or 16 ounce per square foot copper, and shall extend up the vent and turn down inside the vent a minimum of 2 inches below the tope of the pipe. Flashing shall be furnished by the Plumbing Subcontractor and installed by the Roofing Subcontractor.

12. Hose Bibbs shall be provided with vacuum breakers, bare brass for exterior and chrome plated brass for interior applications.

2.03 VALVES (IF APPLICABLE)

A. Valves shall be located as shown on the plans, and as required to provide a complete working system.

1. Gate Valves shall have a rising stem, iron wheel, rough brass body, solid wedge disc, screwed or union bonnet and finished gland nut. Valve shall be 150-pound service. Equal to Crane 431-UB or Nibco-Scott T-131.

2. Globe Valves shall be 125 pound, screwed, all brass, Craine No. 1 or equal.

3. Water Ball Valves shall be only used on 2 inch and small and be one-piece body, 120-pound CWP with brass body and trim, reinforced Teflon seals, and solder ends (equal to Stockham S-127-BR-R-S).

4. Plumbing Stops shall be with chrome plated brass renewable stops and stem seals (equal to Eastman SM12).

5. All Underground Valves, both inside and outside, shall be provided with cast iron valve boxes and shall be provided with a "tee" handle for operation from above. Underground valves 2-1/2 inch and larger shall be provided with square head and operator.

2.04 MISCELLANOUS (IF APPLICABLE)

A. Cleanouts shall be provided, as required by code at all changes in direction greater than 45^{o}, at the bottom of all sanitary stacks, and at the sanitary sewer exit from the building. Size shall be full pipe size up to 4 inches with 4-inch cleanouts for larger sanitary lines. Cleanouts shall be flush with the floor or wall in which they are installed.

B. Floor Drains shall be located as shown on the plans. Drains shall have a cast iron body, inside caulk bottom outlet, and adapter for cast iron trap installation. Provide brass trap primer at locations shown on the plans and at locations required by code. Drains in floors with membrane or lead pans shall be provided with clamping rings.

PART 3 – EXECUTION (IF APPLICABLE)

3.01 INSTALLATION

A. Installation of all plumbing systems shall be in accordance with good commercial practice.

1. Excavating, Backfilling, and Dewatering that are incidental to the plumbing work shall be performed by the Plumbing Subcontractor. The underground installation must be inspected and approved by the Building Department inspector and Architect prior to backfilling and tamping. Care shall be exercised in preparing the bottom of the trench to accept the piping, and it should be uniformly tamped and be free from high spots.

2. Piping Installation shall be run straight, plumb and graded in a direction to permit proper drainage. Route piping as close as possible to the routing shown on the plans.

3. All Cut Pipe shall be cut squarely with a non-chip forming process, where possible. The cut shall be properly reamed to remove all constriction and burrs before making the joint. All exposed threads shall be painted or otherwise coated to prevent corrosion.

4. Pipe joints shall be liquid tight. Sweat solder joints in copper piping systems so that the solder ring is completely visible all around the joints. No acid core flux shall be used.

5. Caulk all piping penetrations of floor and full height walls. Fire rated floors and walls shall be caulked and fire stopped with UL listed Dow-Corning 3-6548 Silicone RTV Foam, 3M Fire Barrier Caulk CP25, or Nelson Flame Seal Putty 303 approved fire stop materials subject to Fire Marshal approval.

6. Use Escutcheon Plates on all piping penetrations of walls, floors, or ceilings in finished areas.

7. Install Underground Water Main in accordance with local utility company requirements and specifications.

8. Trap Primers shall be provided from under lavatory or flush valves per manufacturers instructions as shown on the plan as required by code, to trap of adjacent floor drain.

9. Flashing shall be provided at all roof vents. Flashing shall be furnished by the Plumbing Subcontractor and installed by the Roofing Subcontractor. Flashing shall not be less than 20 inches on the roof, and extend up the pipe and down into the vent a minimum of 2 inches below the end of the pipe.

10. Disinfecting and Sterilization of hot and cold water systems shall be as required by national, state and local requirements, and shall be conducted on the complete system.

11. Testing of piping systems shall be performed by the Plumbing Subcontractor and witnessed by the Building Department inspector.

    a. Domestic hot and cold water supply piping shall be hydrostatically tested at 125 psig for a period of 24 hours.
    b. Soil, water and vent piping, and roof rainwater piping shall be filled with water to the top of the system for a period of 24 hours.

12. Cleanouts shall be located as shown on the plan and as required by code to include all changes in direction of more the 45^{o} at the base of any piping stack, and at not more the 50-foot intervals in horizontal sanitary runs. Cleanouts shall open in a direction opposite to the direction of drainage or at right angles to the direction of drainage. Line cleanouts, which can be routed both ways, shall be provided wherever possible.

13. Piping Supports shall be provided to support both the static weight of the piping and the dynamic loads on the piping during fluid flows.

    a. Piping shall be supported at all tees, valves, and changes in direction.
    b. Distance between supports shall be sufficient to prevent sagging in the piping and pulsations of the piping during operation. Maximum spacing between piping supports shall be as follows:

Nominal Pipe Size	Rod Dia.	Maximum Span
Up to 1"	3/8"	6 feet
1-1/4"	3/8"	8 feet
1-1/2"	3/8"	9 feet
2, 2-1/2 & 3"	½"	10 feet

- END OF SECTION -

DIVISION 26 – ELECTRICAL

SECTION 260500

ELECTRICAL

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes Electrical General Conditions and Electrical Specification.

B. SCOPE OF WORK shall include work as indicated on the plans. The light fixtures are to be cleaned, repaired and replaced as needed. The Contactor shall re-lamp, as needed, with consistent-colored lamps. Contractor shall provide contract closeout documents.

1.03 DRAWINGS AND SPECIFICATIONS

A. Intent of Drawings and Specifications is to obtain a complete and satisfactory installation. An attempt has been made to separate and completely define work of each trade. However, such separations of drawings and specifications should not relieve Contractor from responsibility of compliance with work pertinent to his trade, which may be indicated on any drawings or in any Section of the specifications.

B. Contractor shall carefully examine the Architectural drawings, specifications and the site prior to submitting his bid.

C. Contractor shall furnish, install and connect with appropriate services all items shown on any of the drawings. Architect shall be notified of any discrepancies, omissions, conflicts or interference's, which occur between drawings and specifications. Should notification be received in adequate time, additional data or changes will be issued by addendum to all bidders.

D. The term "provide" shall mean to furnish and install completely unless otherwise indicated.

1.04 EXAMINATION OF SITE

A. Bidders are to visit the site and familiarize themselves with existing conditions and satisfy themselves as to the nature and scope of the work. The submission of a bid will be evidence that such an examination has been made. Later claims for labor, equipment, or materials required, or for difficulties encountered, which could have been foreseen, had an examination been made, will not be allowed.

1.05 QUALITY ASSURANCE

A. Materials and installation, as a minimum, are to conform with the latest edition of the National Electrical Code, the latest edition of the N.F.P.A., and the latest editions of the local codes and ordinances, including all amendments to the N.E.C. equipment, where applicable, will be listed with the Underwriters' Laboratories, Inc. Quality and workmanship established by drawings and specifications are not to be reduced by the above-mentioned codes.

B. Should a code conflict exist, Contractor shall report conflict to Architect before submitting his bid. Should contractor fail to notify Architect, the change required to comply with codes, ordinances, etc., will be at Contractor's expense.

C. Comply with applicable requirements of NEMA Standards Publications pertaining to materials and equipment installed.

D. Comply with applicable requirements of UL safety standards pertaining to electrical systems. Provide products and components, which have UL listing or labeling.

E. Contractor shall obtain necessary inspections and permits. Certificates of inspection issued by authorities having jurisdiction, shall be delivered to the Architect.

1.06 DAMAGE TO OTHER WORK AND PERSONNEL

A. Contractor shall be responsible for proper protective measures when working overhead or in finished areas. Contractor shall repair, replace, or touch up finished surfaces, which are damaged as a result of his work or operations.

B. Contractor shall carry suitable insurance as prescribed by law and as required under the General Specifications paragraphs for protection of his employees, other persons, materials, and equipment on building site.

1.07 RECORD DRAWINGS

A. Contractor shall maintain a complete set of contract drawings at job site with colored markings indicating progress of work. This set of contract drawings is to be separate from and in addition to Contractor's construction set. Every unit of equipment, device, conduit, and wire is to be marked when installed. Use GREEN to indicate installation as shown on drawings. Use RED to indicate field changes.

B. Upon completion of work, this set of contract drawings is to be turned over to, and become the property of the Architect.

1.08 SUPERVISION OF WORK

A. Contractor's Superintendent shall be experienced, qualified and on the job when work is in progress.

B. Superintendent who is incompetent, in opinion of Architect, will be immediately replaced upon written request. Satisfactory Superintendent will not be withdrawn without consent of Architect.

1.09 CONNECTING TO WORK OF OTHERS

A. Before starting work under this division of the Specifications and from time to time as work progresses, Contractor shall examine work and materials installed under other divisions of the Specifications insofar as they apply to his work and should notify the Architect immediately, in writing, should conditions exist which prevent satisfactory results in installation of system.

B. Should Contractor start work without such notification, he shall remove and replace, at his own expense, any work under this division of the Specifications required due to such conditions.

1.10 CUTTING, PATCHING, AND EXCAVATION

A. Cutting and patching of walls, partitions, floors, concrete, pits, and chases in wood and masonry shall be done by Contractor as provided on the drawings or as directed by the Architect. Cutting of steel, wood, concrete slabs, or other main structural members must be approved by the Architect prior to cutting.

B. Contractor shall be responsible for sealing all conduit penetrations made through fire rated walls, ceilings, slabs, etc. Penetration seals shall be per U.L. Assembly standard.

1.11 CLEANING AND ADJUSTMENTS

A. Upon completion of work, Contractor shall clean all lighting fixtures, device plates, equipment enclosures, trim flanges, etc. furnished under this section of specifications. Operable equipment and enclosures will be adjusted and made ready for testing.

1.12 REMOVAL OF RUBBISH

A. Contractor shall, at all times, keep premises free from accumulations of waste materials or rubbish caused by his employees or work. At completion of work, all tools, scaffolding, materials, and rubbish shall be removed from building site. Premises shall be left in a clean and orderly condition acceptable to the Architect.

1.13 ACCEPTANCE

A. Seven (7) days prior to date of requested Final Inspection, Contractor shall:

1. Complete work under his contract.

2. Furnish to the Architect certificates of inspection issued by authorities.

3. Acceptance will be by Architect on the basis of tests and inspection of the job. Contractor shall furnish necessary equipment and assist with Final Inspection.

1.14 WARRANTIES AND GUARANTEE

A. In addition to guarantee of equipment by manufacturer, Contractor shall also guarantee such equipment, which will include tests, adjustments and/or replacements of defective equipment, materials, and workmanship for a period of one (1) year from final acceptance of building by Architect.

B. Contractor shall furnish three (3) complete sets of operation instructions applying to each piece of equipment installed, including parts lists and Maintenance brochures.

PART 2 – PRODUCTS – NOT USED

PART 3 – EXECUTION – NOT USED

- END OF SECTION -