



CONSTRUCTION SPECIFICATIONS:

RFP 24-0607
400 N. Carver Street, Building B Remodel
Midland, Texas 79701

June 7, 2024

Project # 24-01 A



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01 11 00.1

SUMMARY OF THE WORK

1.00 GENERAL

1.01 DOCUMENT APPLICATION

The following documents, whether specifically mentioned in the separate Sections or not, apply in full to all Sections of the construction specifications.

- A. Request for Proposals RFP 24-0607
400 N. Carver, Building B Remodel
- B. DIVISION 1 - GENERAL REQUIREMENTS.

1.02 PROJECT LOCATION

- A. As indicated on the drawings at 400 N. Carver St., Midland, Tx. 79701

1.03 WORK UNDER THIS CONTRACT

- A. The following is a general description of the work to be included in the general contract: Supply, install and erect all materials, finishes, mechanical work, electrical work and equipment (except that noted as "By Owner"), all as shown and described in the Drawings and Construction Specifications titled 400 N. Carver Street, Building B. "Revised."
- B. Unless otherwise specified, Contractor supply labor, transportation, products, materials, apparatus, fees, permits, fuel, energy, scaffolding and tools necessary for the entire, proper and substantial completion of the Work. Install, maintain and construct the complete Work as shown on the Drawings, stated in the Construction Specifications or reasonably implied from and according to the Contract Documents.

1.04 WORK BY OTHERS

- A. Unless otherwise indicated on the drawings, the following items are not in the contract (N.I.C.) and are provided and installed "By Owner" or his sub-contractors:
 - 1. Exterior wood fencing
 - 2. Interior & Exterior Painting
 - 3. Security System & Equipment, Cameras, Cabling & Terminations
 - 4. IT Systems, IT Equipment, Cabling & Terminations
 - 5. Accessible Parking stripping and Signage.
 - 6. Kitchen Appliances
 - 7. Furnishings
- B. The following items are supplied by Owner (S.B.O.) at the project site and installed by the Contractor: None
- C. The following items are existing and are to be carefully removed, stored, relocated and reinstalled by the General Contractor:
 - 1. HVAC Unit #3 as indicated on the drawings.

1.05 ALLOWANCES

- A. **Contingency Allowance:** General Contractor include in his bid the amount of **\$40,000 (forty thousand dollars)** as an Owner's Contingency Allowance. This Contingence Allowance will be used only on specific items that have been approved by the Architect and the Owner.
- B. The allowance amount **includes** the following "actual cost" items:
 - 1. Construction Materials and Products (as selected by the Architect).
 - 2. Installation and labor costs by the installer or sub-contractor.
 - 3. Adhesives and miscellaneous installation materials.
 - 4. Delivery to the job site.
 - 5. Storage at the job site (if required)
 - 6. State and local sales taxes (not applicable since the Owner is a 501 (c)3 "Non-Profit" Organization)
 - 7. Warranty
 - 8. General Contractor's overhead and mark-up, or profit.
- C. The allowance figure **does not include** the following items: None
- D. Provide documentation (satisfactory to the Architect) as verification of "actual cost" of materials included in all allowance amounts. Should the "actual cost" of products and materials be greater than or less than the allowance amount, then the Contract Sum will be adjusted accordingly.
- E. At the close of the job any money remaining in the Contingency Allowance will be dedicated from the outstanding balance due to the Contractor.
- F. Other allowances and allowance coverages (if any) are specified in the various sections in the Specifications.

1.06 COORDINATION

- A. The Architect is the Owner's representative during construction and until final payment. The Architect will advise and consult with the Owner on matters of design, construction, changes and change orders involving extras or credits. Owner's instructions to the Contractor will be issued, in writing, through the Architect.
- B. Contractor to coordinate the Work with Work "By Owner". Contractor is responsible for timely notification of preferred delivery and installation dates for Work by Owner.
- C. Contractor protect completed Work "By Owner" until the completed project is accepted by the Owner.

1.07 EXAMINATION OF PREMISES

- A. Before submitting proposal for work, Contractor examine the site and existing facilities to verify existing conditions under which he will be obligated to operate or that will (in any manner) affect the work under this Contract. No allowance will be made subsequently in behalf of the Contractor for any error or negligence on his part.
- B. Contractor required to verify existing conditions (including staging areas and utilities) which will affect work under this contract.

1.08 APPLICABLE CODES & REGULATIONS

- A. All new construction to conform to code requirements of City of Midland:
 - 2018 International Building Code
 - 2015 International Energy Conservation Code
 - 2018 International Plumbing Code
 - 2015 International Fire Code
 - 2018 International Mechanical Code
 - 2018 International Fuel and Gas Code
 - 2017 National Electrical Code
- B. The construction of the completed work to comply with regulations (as required) relating to the following:
 - 1. Texas Accessibility Standards (TAS)
 - 2. Americans with Disabilities Act (ADA)

1.09 SUPERINTENDENCE

- A. Job Layout:
 - 1. Accurately lay out work lines and walls for interior work. Notify the Architect of any discrepancies.
 - 2. See that work of all trades goes into place in its correct relation to finish work.
- B. Inspection of Job Conditions before one phase of work follows another is the responsibility of Contractor in compliance with these specifications.
 - 1. See that joint inspections are made involving interested parties.
 - 2. Portions of these inspections may be observed by Architect. Schedule such inspections to coincide with Architect's routine visits to site.
 - 3. Architect will confine his observations to only limited areas. It is the responsibility of the Contractor to complete code required inspection procedures of all areas involved.
 - 4. Acceptance of job conditions in whole or in part by Architect in no way relieves the Contractor of his obligation to provide various stages of work (as well as finished work) complying with the Contract Documents.
 - 5. Allow no work of any trade to proceed over work not in accordance with the Contract Documents.
- C. Storage Requirements: Secure from product suppliers specific on - site storage requirements and see that they are complied with.

1.10 CLOSING-IN WORK

- A. Cover no piping, wiring, ducts, etc., and pour no concrete until City inspection has been made and approval given, or certificates issued, if required.
- B. Contractor to notify the City (or agency required) in ample time for each inspection and issuance of proper certificates.

1.11 CUTTING AND PATCHING

- A. Perform cutting, fitting or patching of Work that may be required to make the several parts fit together properly.

1.12 PRE-CONSTRUCTION CONFERENCE

- A. A Pre-Construction Conference will be held as soon as practical after "Notice to Proceed" has been issued. At this conference, representatives of the Owner, Architect, General Contractor, his superintendent and major sub-contractors will be present. Preconstruction Conference will be held at the job site.
- B. The method of executing the contract will be discussed in detail to ensure that actual construction work can proceed smoothly and efficiently with little loss of time to the Contractor or to the Owner.

1.13 SECURITY

- A. Do not leave the building in an open or un-secured basis after "normal" business hours.

END OF SECTION

01 25 00.1

SUBSTITUTIONS

1.00 GENERAL

1.01 SUBSTITUTIONS

- A. Submit requests for substitutions of products in place of those specified no later than 5:30 pm seven (7) calendar days prior to the bid date.
- B. For all substitution requests, complete and submit to Architect through the General Contractor using the attached form.
- C. The Architect may consider requests for substitutions as follows:
 - 1. The request is accompanied by complete data on the proposed substitution substantiating compliance with the Contract Documents.
 - 2. Include product identification and description, performance and test data, references and samples (where applicable), and an itemized comparison of the proposed substitution with the products specified or named by Addenda, with data relating to Contract time schedule, design and artistic effect where applicable.
- D. Requests for substitution, when forwarded by the Contractor to the Architect, are understood to mean that the Contractor:
 - 1. Has investigated the proposed substitute product and determined that it is equal to or superior in all respects to that originally specified;
 - 2. Will provide the same or superior guarantee for the substitution that would be supplied for the original product;
 - 3. Will coordinate the installation of the substitute (if accepted), making such changes as may be required for the Work to be complete in all respects.
- E. Substitutions **will not be considered** under the following conditions;
 - 1. When indicated or implied on shop drawing submissions without the formal request required (see paragraphs B and C above);
 - 2. For their implementation, they require a substantial revision of the Contract Documents in order to accommodate their use.
- F. It is the Contractor's responsibility to see that substitutions approved by the Architect meet space, functional, finish and operational requirements. Burden of proof for consideration of comparable items rests with Contractor requesting approval.

1.02 ARCHITECT'S REVIEW

- A. Architect will review properly submitted requests for substitutions and if accepted will issue an addendum. Proposed substitutions not listed by addendum are not approved.

1.03 APPROVAL AND ACCEPTANCE OF SUBSTITUTIONS

- A. Approval and acceptance (in these specifications) means approval and acceptance by the Architect.
- B. Acceptance of substitutions by the Architect will not bind the Owner in case of proven defective work or other violation of the contract. Approval of substitutions will

not constitute acceptance in case such items are found not to comply with specification requirements.

- C. Upon receipt of a request for substitutions, the Architect may approve a manufacturer as being acceptable without approving a specific manufacturer's product.

END OF SECTION



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SUBSTITUTION REQUEST (During the Bid Period)

Project: Permiacare Substitution Request Number: _____

To: _____ From: _____

_____ Date: _____

_____ A/E Project Number: _____

Re: _____ Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Trade Name: _____ Model No.: _____

Manufacturer: _____ Address: _____ Phone: _____

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description or changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal to or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source or replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay project schedule.
- Proposed substitution does not affect dimensions and functional clearances.

Submitted by: _____

Firm: _____

Address: _____

Telephone: _____

A/E's REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Specification Section 01 25 00 Substitution Procedures.
- ☐ Substitution approved as noted - Make submittals according to Specification Section 01 25 00 Substitution Procedures.
- ☐ Substitution rejected - Use specified materials.
- ☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

01 30 02.3

SUBMITTALS

1.00 GENERAL

1.01 DESCRIPTION

This section covers additional procedures and provisions for submittal of Samples, Shop Drawings, Product Data and Maintenance Manual.

- A. General Provisions for Electronic Submittal Procedures – Summary:
 - 1. Electronically, transmit shop drawing and product data submittals to the Architect in PDF format.
 - 2. Do not use the electronic submittal process for color samples, color charts or physical material samples.
- B. Submittal Preparation:
 - 1. General Contractor provide access to electronic submittals for each subcontractor and supplier. Subcontractors and Suppliers provide electronic (PDF) submittals to Contractor via the Architect's established "DropBox" process.
 - 2. General Contractor review all submittals and apply his electronic stamp certifying that the submittal complies with the requirements of the Contract Documents. Include verification of manufacturer, product, dimensions and coordination of information with other parts of the Work.
 - 3. General Contractor transmits each submittal to Architect using the Architect's established process.
 - 4. After Architect's / Engineer's review, comments will be made available for downloading. General Contractor will receive separate email from Architect with notice of Architect's completed review.
 - 5. Distribution of reviewed submittals to subcontractors and suppliers is the responsibility of the Contractor.
 - 6. At project closeout submit electronic copies (on compact disc or other Architect approved mass storage device) of "approved" submittals for Owner's Record Documents purposes.

1.02 SHOP DRAWING PREPARATION - Clearly indicate the following on each sheet:

- A. Sheet numbers (consecutively listed).
- B. Working and erection dimensions.
- C. Show arrangements, elevations, details and sectional views as required in the various specification sections.
- D. Indicate anchoring and fastening details, including information for making connections to adjacent work.
- E. Furnish complete installation instructions to achieve Architect's and manufacturers' designed and planned intentions.

1.03 SUBMISSION OF SHOP DRAWINGS

- A. At the Architect's direction, submit shop drawings, including fabrication, erection, layout and setting drawings and such other drawings as may be required under various sections of the specifications. Submit until final review and approval is obtained.
- B. Submit manufacturer's product data including catalog sheets for materials, equipment and fixtures, showing dimensions, performance characteristics and capacities, wiring diagrams and controls, schedules, and other pertinent information as required. Where materials describe more than one product or model, clearly identify which is to be furnished.
- C. Contractor to provide electronic access to distribute shop drawings to sub-contractors and material suppliers after, Architect's final approval. Supply only reviewed shop drawings to job site "for construction" purposes which carry the Architect's appropriate stamp.

1.04 SAMPLE PREPARATION

- A. Prepare physical samples in size, shape and finishes according to provisions in the various specification sections.
- B. Unless otherwise required, submit not less than four (4) of each sample specified to be submitted. When sets or ranges of samples are requested, submit not less than four (4) sets of ranges.

1.05 DISTRIBUTION OF SAMPLES

- A. Architect will provide 1 approved sample to the Owner; 2 approved samples will be returned to General Contractor. Architect will retain 1 approved sample.
- B. Retain one set of approved samples at the job site for comparison with job construction.

1.06 CONTRACTOR'S REVIEW

- A. Contractor review, stamp with approval, and transmit submittals specified by the contract documents (or subsequently by modifications) with reasonable promptness and in orderly sequence to cause no delay in Work.
- B. Contractor determine and verify field measurements, field construction criteria, materials, catalog numbers and similar data. Check and coordinate shop drawing and samples with requirements of the work and of the contract documents.
- C. Contractor represents by submitting shop drawings and samples that he has complied with "Contractor's Review" provisions specified above. Submissions made without Contractor's approval stamp may be returned by the Architect without being reviewed for compliance with design concept.

1.07 ARCHITECT'S REVIEW

- A. Architect's review is for general conformance with the design concept and contract documents. Do not construe markings or comments as relieving the Contractor from compliance with the project plans and specifications.

- B. Contractor remains responsible for details and accuracy, for confirming and correlating, all quantities and dimensions, for selecting fabrication processes, for techniques of assembly, and for performing his work in a safe manner.
- C. Architect will review and, return submittals (with reasonable promptness so as to cause no delay in the Work) with the following comments:
 - 1. "No Exceptions Taken"
 - 2. "Note Markings"
 - 3. "Rejected"
 - 4. "Comments Attached"
- D. The response required of the Contractor by the Architect will be:
 - 1. "Confirm"
 - 2. "Resubmit"

1.08 UNAPPROVED SUBMISSION

- A. Submissions not complying with Contract Documents will be returned noted "Rejected".

1.09 RESUBMISSION

- A. Make corrections and revisions indicated on "Rejected" submissions and resubmit in same manner as specified above. Resubmit until Architect's response is "No Exceptions Taken".
- B. In resubmission transmittal, direct specific attention to revisions other than corrections requested by Architect on previously "Rejected" submission, if any.

2.00 PRODUCTS Not Used.

3.00 EXECUTION Not Used.

END OF SECTION

01 31 20.2

PROGRESS MEETINGS

1.00 GENERAL

1.01 DESCRIPTION

- A. This section includes requirements for progress meetings during construction for purposes of scheduling and coordination of the work.

1.02 PROGRESS MEETINGS

- A. Schedule regular progress meetings (on a day and at time to be mutually agreed upon), special called meetings, and preinstallation conferences, throughout progress of work.
- B. Make physical arrangements, prepare agenda, and notify participants, and Architect in advance of meeting. Location of meetings: To be determined.
- C. Contractor record minutes, and distribute copies to participants after the meeting.
- D. Attendance: Contractor, project manager, job superintendent, major subcontractors, (only when appropriate to agenda and stage of work in progress), Owner and Architect.
- E. Minimum Agenda:
 - 1. List of Attendees.
 - 2. Review minutes of previous meetings.
 - 3. Summary of Construction Progress since last meeting.
 - 4. Planned progress during upcoming work period.
 - 5. Review safety and security.
 - 6. Review of schedule and status of submittals.
 - a) Identification of problems impeding progress.
 - b) Corrective measures to regain projected schedule.
 - 7. Proposed changes and effect on schedule.
 - 8. Other business relating to work.
 - 9. Field Observations, problems and decisions.

1.03 PREINSTALLATION CONFERENCES

- A. When required in individual specification sections, convene a preinstallation conference at work site prior to commencing work of the section.
- B. Require attendance of entities directly affecting, or affected by, work under that section. Notify Architect in advance of meeting date.
- C. Review conditions of installation, preparation and installation procedures, and coordination with related work.

2.00 PRODUCTS NOT USED

3.00 EXECUTION NOT USED

END OF SECTION

01 50 00

TEMPORARY FACILITIES AND CONTROLS

1.00 GENERAL

1.01 SECTION INCLUDES

- A. Temporary Utilities
- B. Temporary telecommunications services.
- C. Temporary sanitary facilities.
- D. Temporary Controls: Barriers, enclosures, and fencing.
- E. Security requirements.
- F. Vehicular access and parking.
- G. Waste removal facilities and services.
- H. Field offices.

1.02 TEMPORARY UTILITIES

- A. Provide for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes.
- B. Existing facilities may be used with Owner's prior approval.
- C. ELECTRICAL SERVICE, LIGHTING
 - 1. Provide service required for construction operations, with branch wiring and distribution boxes located to allow service and lighting by means of construction-type power cords.
 - 2. Provide lighting for construction operations.
 - 3. Permanent lighting may be used during construction. Maintain lighting and make routine repairs.
- D. AC, HEAT, VENTILATION
 - 1. Provide as required to maintain specified conditions for construction operations, to protect materials and finishes from damage due to temperature or humidity.
 - 2. Provide ventilation of enclosed areas to cure materials, to disperse humidity, and to prevent accumulations of dust, fumes, vapors, or gases.
 - 3. Provide temporary weather-tight closures of openings in exterior surfaces to provide acceptable working conditions and protection for materials, to allow for temporary heating, and to prevent entry of unauthorized persons. Provide doors with self-closing hardware and locks.

E. WATER

1. Water required in the performance of the contract to be provided and paid for by the Owner. Water used for human consumption to conform to requirements of State and Local Authorities for potable water.

F. TEMPORARY FIRE PROTECTION

1. The Contractor and Subcontractor to observe and the Contractor to enforce throughout the work during the whole period of construction all requirements of City, State and Insurance authorities to minimize the fire hazards during the progress of the Work.
2. Remove combustible trash from within the building daily.
3. Contractor provide fire extinguishers as required by the local fire department and City ordinances.

1.03 TELECOMMUNICATIONS SERVICES

- A. Contractor provide, maintain, and pay for telecommunications services to field office at time of project mobilization.

1.04 TEMPORARY SANITARY FACILITIES

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

1.05 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades required by governing authorities for public rights-of-way and for public access to existing building.
- C. Provide protection for existing trees and plants designated to remain. Replace damaged plants.
- D. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 FENCING

- A. Provide 6-foot-high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.07 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for construction materials, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

- B. Keep existing building weather-tight at all times during construction.

1.08 VEHICULAR ACCESS AND PARKING

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Designated existing on-site roads may be used for construction traffic.
- F. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

1.09 PROTECTION OF INSTALLED WORK

- A. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage.
- B. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings. Protect finished floors and stairs from traffic, movement of heavy objects, and storage.
- C. Prohibit traffic and storage on lawn and landscaped areas.

1.10 FIELD OFFICES

- A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment.
- B. Equipped with sturdy furniture, drawing rack and drawing display table.
- C. Provide space for Project meetings, with table and chairs to accommodate 10 persons.
- D. Locate offices a minimum distance of 30 feet from existing and new structures.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.

2.00 PRODUCTS - NOT USED

3.00 EXECUTION - NOT USED

END OF SECTION

01 73 29

CUTTING AND PATCHING

1.00 GENERAL

1.01 DESCRIPTION

- A. This section includes cutting, fitting, and patching required to complete the “tie-in” of new work into the existing construction.

1.02 UTILITY SERVICES

- A. Maintain existing utilities indicated to remain; keep in service, and protect against damage.
- B. Confirm scheduled utility interruptions with the Owner seven (7) days in advance of the interruption. Do not proceed until Owner approval has been obtained.
- C. Maintain operation of existing fire sprinkler system. Notify the Owner before system or parts of system must be inactive to allow tie-in of new work. Minimize hazardous exposures during time fire sprinkler system is out of service.

2.00 PRODUCTS

2.01 MATERIALS

- A. Comply with specifications and standards for each specific product involved.

3.00 EXECUTION

3.01 INSPECTION

- A. Inspect existing conditions of the project, including elements subject to damage or to movement during cutting, coring, and patching.
- B. After uncovering work, inspect the conditions affecting the installation of products or performance of the work.
- C. Report unsatisfactory or dubious conditions to the Architect in writing; proceed with the work only after the Architect has provided further instructions.

3.02 PREPARATION

- A. Provide temporary shoring, bracing, and other support as necessary to assure the structural safety of that portion of the work.
- B. Provide devices and methods to protect other portions of the project from damage.
- C. Provide protection from the elements for that portion of the project which will be exposed by cutting and patching work.
- D. Roofing: Before work begins near existing roof, conduct a coordination meeting with the Architect. Maintain the roof in waterproof condition during the construction period.

3.03 PERFORMANCE

- A. Execute cutting, coring, and demolition by methods which will assure safety, will prevent damage to other work, and will provide proper surfaces to receive new construction period.
- B. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes. Where not specified, match existing materials and finishes.
- C. Where removal results in adjacent spaces becoming one, rework floors and ceilings to provide smooth planes without breaks, steps or bulkheads.
- D. Where extreme change of plane (two inches or more) occurs, request instructions as to method of making transition.
- E. Restore work which has been cut or removed; install new products to provide completed work according to requirements of the Contract Documents.
- F. When new work abuts or finishes flush with existing work, make a smooth and workmanlike transition. Patched work to match existing adjacent work in texture and appearance so that the patch or transition is not visible.
- G. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - 1. For continuous surfaces, refinish to nearest intersection.
 - 2. For an assembly, refinish the entire unit.
- H. At completion of work of each trade, clean area and make surfaces ready for work of successive trades.

END OF SECTION

01 74 23

CLEANING UP

1.01 DESCRIPTION

- A. This section covers procedures and provisions for cleaning up.
- B. Definitions of terms used in this section:
 - 1. "rough work" - concrete, unexposed masonry, structural steel and the like.
 - 2. "semi-rough work" - exposed concrete block, finish masonry, plastering and the like.
 - 3. "finish work" - involving finished surfaces throughout the work.
 - 4. "broom cleaning" - cleaning by sweeping with broom and using a commercial dust retardant where specified.
 - 5. "commercial equipment" - includes commercial waxing, vacuuming and shampooing cleaning and maintenance equipment.
 - 6. "construction rubbish" - any debris or trash occasioned by execution of the work.
- C. Do not allow rubbish, waste, condemned materials and surplus materials not to be incorporated into the work (except those specified for maintenance purposes) to accumulate; remove from site on a timely schedule.
- D. Provide and pay for separate trash collection. Do not use the building dumpsters or those supplied by other contractors. Locate trash at a remote point on the site away from the building.
- E. Before project close-out, remove construction tools, scaffolding, equipment and machinery from site.

1.02 COLLECTION OF CONSTRUCTION RUBBISH

- A. "Rough Work" Stage of Construction: Collect rubbish in containers and remove from site at regular intervals.
- B. "Semi-rough Work" Stage of Construction:
 - 1. Provide containers to receive construction rubbish and trash located at strategic points.
 - 2. Allow no rubbish and trash to accumulate not in containers provided.
 - 3. Empty containers at regular intervals.
 - 4. Maintain building "broom clean".
 - 5. Use a dust retardant in combination with broom cleaning in semi-rough work areas adjacent to but separated from areas where finish work is in progress.
- C. "Finish Work" Stage of Construction:
 - 1. Pick-up and empty containers daily.
 - 2. Take precautions not to create dust in finish areas.
 - 3. Use commercial cleaning equipment in areas where finish work is being executed.

1.03 CLEANING MATERIALS AND METHODS

- A. Clean according to manufacturer's instructions of the materials cleaned.

- B. Cleaning to result in a uniform appearing finish surface clean of foreign matter. Where cleaning operations begin or stop to not be evident in the finished work.
- C. Do not damage or mar adjacent work with cleaning operations.

1.04 FINAL CLEANING

- A. Building Finish Surfaces:
 - 1. Just before final inspection, clean all interior finish surfaces of dirt, dust, stains, labels, fingerprints and other foreign substances.
 - 2. Clean electric fixtures on both sides of lenses.
 - 3. Vacuum carpet using commercial equipment. Shampoo only if required to remove dirt and stains.
- B. Mechanical Work:
 - 1. Check filters in all air handling equipment and replace.

2.00 PRODUCTS - NOT USED

3.00 EXECUTION - NOT USED

END OF SECTION

02 41 01

SELECTIVE DEMOLITION

1.00 GENERAL

1.01 DESCRIPTION

- A. This section includes selective demolition and the disposal of portions of the existing materials as indicated on the drawings and scheduled.

1.02 QUALITY ASSURANCE

- A. Codes and Reference Standards - Conform to the codes, recommendations, specifications, and standards of applicable local and state codes and regulations.

1.03 JOB CONDITIONS

- A. Inspect premises (prior to submitting proposal) to verify existing conditions which will affect the Work.
- B. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner insofar as practicable. However, variations within the structure may occur by Owner's removal and salvage of certain items prior to the start of the demolition work.
- C. Traffic:
 - 1. Conduct demolition operations and the removal of debris to insure minimum interference with roads, streets, walks, other adjacent occupied facilities, and the Owner's existing operations.
 - 2. Do not close or obstruct streets, driveways, alleys, walks or other occupied facilities without permission from the Architect, the Owner and local governing authorities. Provide alternate routes around closed or obstructed traffic ways.
- D. Protection: Provide necessary protections to insure the safe passage of persons around the area of demolition. Conduct operations to prevent damage to adjacent buildings trees, structures, and other facilities.
- E. Damages: Promptly repair damages caused to adjacent facilities by demolition operations.
- F. Utilities: If required, shut off utilities traversing the demolition area. Disconnect and seal or relocate utilities as indicated on the drawings or as may be required before starting demolition operation.

1.04 FEES AND PERMITS

- A. Contractor provides fees, permits, etc. as required by local governing authorities.

2.00 PRODUCTS – NOT USED

3.00 EXECUTION

3.01 DEMOLITION

- A. Provide written notice to Owner prior to start of demolition work.

- B. Provide temporary closures, exits, noise and dust control measures so that the Owner's facility will remain reasonably clean, safe and weather tight.
- C. Proceed with demolition in a systematic manner.
- D. Demolish in small sections. Remove materials indicated on the drawings and as scheduled.
- E. Partial Demolition: Provide clean, saw cut edges where portions of monolithic materials (such as concrete slabs, drywall work, etc.) are removed.

3.02 SALVAGED MATERIAL

- A. Salvage, store and protect from damage materials as indicated on the drawings to be removed, reused and reinstalled.
- B. Other materials demolished by the Contractor may be retained by the Owner for subsequent use or re-sale. Other material to be retained will be removed from the site by the Owner (after demolition by the Contractor) and stored by the Owner.

3.03 DISPOSAL OF DEMOLISHED MATERIALS

- A. At regular intervals remove from the site all debris, rubbish, and other materials resulting from demolition operations, and legally dispose of (off the site). Storage or sale of demolished materials to be removed will not be permitted on the site.
- B. Remove as the work progresses and transport from the site, items of salvable value to the Contractor which are not scheduled to be retained for reuse.
- C. Carefully remove, retain and store on the site (in a protected area under cover) those items indicated to be reused or reinstalled.

3.04 CLEANING-UP

- A. Clean adjacent structures and improvements of all debris caused by demolition operations.
- B. Return remaining adjacent areas to condition existing prior to the start of the demolition work.

END OF SECTION

DIVISION 04 00 00

MASONRY

04 05 13 MASONRY MORTAR

1.00 GENERAL

- A. Submit product specs, information and sample colors (for selection by Architect) for the completed work.
- B. Deliver, handle and store products according to manufacturer's recommendations.
- C. Cold and Hot Weather Requirements: Comply with ACI 530/530.1/ERTA

2.00 PRODUCTS

- A. Portland Cement: ASTM C-150, Type I, natural color, non-staining.
- B. Hydrated Lime: ASTM C-207, Type S.
- C. Aggregate: Natural Sand: ASTM C-144, clean, natural washed sand.
- D. Mortar Color - for exposed Masonry only (Color match existing).
- E. Moisture Resistant Admixture: Master Builders "Omnicorn Mortarproofing".
- F. Water: Clean, potable.

3.00 EXECUTION

- A. Proportions by volume: ASTM C-270, Type "S" and as follows:
1 part Portland Cement, 1/2-part Lime, 4 parts sand
Admixture (manufacturer's recommendation)
- B. Mix mortar ingredients according to ASTM 270.
- C. Pre-mixed and bagged masonry mortar (meeting these same proportions) is acceptable.
- D. Joint Treatment: Strike exposed joints concave in finished masonry. Match adjacent existing mortar joints. When partially set, tool joint with a rounded joint tool. Fill voids and holes in joints.

04 05 23 MASONRY ACCESSORIES

1.00 GENERAL

- A. Submit manufacturer's product data, specifications and installation instructions.
- B. Deliver, handle and store products according to manufacturer's recommendations.

2.00 PRODUCTS

- A. Veneer Anchors: 16 gauges x 1 inch wide, 1.5 oz. hot dip galvanized, corrugated anchors;
9 gauge galvanized adjustable anchors.

3.00 EXECUTION

- A. Install anchors, as indicated on the drawings (and as required by codes) but not more than 24" o.c. vertically and horizontally for brick veneer attachment.

04 21 13 BRICK MASONRY

1.00 GENERAL

- A. Supply samples (6 minimum) indicating range of colors, textures and finishes; match existing.
- B. Deliver, handle and store brick according to manufacturer's recommendations.
- C. Lay no brick when air temperature has dropped below 40 degrees F.
- D. Unless air temperature is rising, lay no brick when air temperature has dropped below 45 degrees F.
- E. Maintain air temperature above 40 degrees F. on both sides of masonry for at least 72 hours after laying.

2.00 PRODUCTS

- A. Face Brick: ASTM C-216 or C-652, Type fbx or hbx, Grade sw.; match existing.
- B. Masonry Cleaner: ProSoCo, Inc. - "SureKlean". **Muriatic Acid is not allowed.**
- C. Air Barrier: Refer to Section 07 25 00.
- D. Weeps: Honeycomb-style. Hohmann & Barnard; Product QV; or approved equal.
- F. Through-Wall Membrane Flashing: Refer to Section 04 27 23.

3.00 EXECUTION

- A. Lay masonry plumb, level and true to line in common running bond.
- B. Build in work of other trades including anchors, lintels, electrical items, expansion joints and accessories. Fill void spaces around built-in items with mortar.
- C. Mortar joints: 3/8" wide; tooled concave; match existing.
- D. Fill hollow metal frames in masonry walls with grout as wall is laid up. Rake back 1/2" joint between hollow metal frame and adjacent masonry to receive sealant.
- E. Lay masonry to receive flashing with smooth joints, free from projections. Provide mortar on both sides of through-wall flashing at joints.
- F. Provide weeps in exterior wythe of masonry at 48" o.c. horizontally, at head and sill of openings, in exterior walls below slab and above exterior finish grade and in other locations where through-wall flashing is indicated.
- G. Provide 3/8" control joints as indicated on drawing. If not indicated, provide control joints above doors and windows at each side. Leave joint open and clean for sealant.
- H. Clean surfaces of excess mortar, stains and foreign matter using approved masonry cleaning solution. **Muriatic Acid is not allowed.** Protect adjacent areas from damage. Apply cleaning solution according to the manufacturer's instructions.

04 27 23 THROUGH-WALL MEMBRANE FLASHING SYSTEM

1.00 GENERAL

- A. Submit manufacturer's product data, specifications and installation instructions.
- B. Deliver, handle and store products according to manufacturer recommendation.

2.00 PRODUCTS

- A. Hohmann & Barnard, Inc; Flex-Flash Flashing.
- B. Built-in flashing membrane: 40 mil flexible, composite sheets.
- C. Membrane Adhesive: exceed the requirements of TTS00230C Type II, Class B, ASTM C 92094; color as selected.
- D. Surface-adhered membrane: 40-mil composite membrane sheet.
- E. Cloaks: Pre-formed, three-dimensional flexible units used for detail corners, level changes, stop ends, and special applications.

3.00 EXECUTION

- A. Prime all flashing substrates. Built in flashing membrane and cloaks: Install in bed of fresh mortar. Extend through the outer wythe a minimum of 1/4".
- B. Provide weep holes at 24-inch centers immediately above all flashing.
- C. Lap all flashing membrane joints 4" minimum using flashing membrane adhesive.
- D. Install flashing membrane 6" minimum above finished grade level.
- E. Install cloaks and end dams at all window and door heads and sills.
- F. Install vertical flashing at wall openings into the wall opening 4". Install the door/window frame with the flashing extending onto the back of the frame.

END OF SECTION

DIVISION 06 00 00

WOOD, PLASTICS, AND COMPOSITES

06 20 00 FINISH CARPENTRY AND MILLWORK

1.00 GENERAL

- A. Architect reserves the right to approve millwork fabricator.
- B. Submit shop drawings including plans, layouts, elevations, schedules and details, which show general arrangement, dimensions, materials, and construction for the completed work (including anchoring systems to adjacent materials).
- C. Submit samples of plastic laminate not less than 3" x 4" indicating colors, texture and finishes.
- D. Conform to the codes, recommendations, specifications, and standards of AWI/AWMAC/WI (AWS) "Architectural Woodwork Standards", 2009.
- E. Do not deliver millwork to job site until building is "closed-in", dry and heating/air conditioning/ventilating systems are operating.
- F. Handle and store products according to manufacturer's recommendations. Prevent damage, deterioration and contamination.

2.00 PRODUCTS

- A. Comply with applicable quality standards and grades as scheduled.
- B. Fabricate millwork to dimensions, profiles and details as shown.
- C. Assemble (in the shop) in as large units as practicable; minimize field cutting and jointing.
- D. Plastic Laminate (Acceptable Manufacturers):
 - 1. Wilson Art
 - 2. Formica Corp.

3.00 EXECUTION

- A. Install finish carpentry and millwork according to approved shop drawings, samples, and as indicated on the drawings.
- B. Install finish carpentry and millwork plumb, level, true and straight with no distortions. Shim as required using concealed shims.
- C. SCHEDULE OF FINISH CARPENTRY AND MILLWORK:
 - 1. Running and Standing Trim: NONE
 - 2. Casework (Plastic Laminate Clad):
 - AWI Quality Grade: "Premium Grade" (Reveal overlay)
 - Semi-exposed Parts: Laminate clad
 - Sizes and Shapes: As indicated
 - Finish: Plastic laminate in color and texture selected by Architect from manufacturer's standard and accent range.
 - 3. Countertops, Back splash, End splash:
 - Construction: AWI "Premium Quality Grade"
 - Base Material: Particleboard; "industrial" grade with backer sheet at each side.
 - Solid Surface: plastic resin sheets or casting; as selected by Architect
 - Flat Sheet Thickness: 1/2-inch, minimum.
 - Comply with ISSFA-2 and NEMA LD 3; acrylic or polyester resin, mineral filler and pigments; homogenous, non-porous.
 - Surface Burning Characteristics: Flame spread 25, maximum; smoke developed 450, maximum; when tested according to ASTM E84. Finish on Exposed Surfaces: Matte, gloss rating of 5 to 20.

Color and Pattern: As selected.

Acceptable Manufacturers: DuPont "Corian".

4. Hardware:

Hinges: Youngsdale #5 (2 per door); finish as selected primed

Locks (provide only when indicated on the drawings): Lori #1700 and #1750
(cadmium finish) locks (1 per drawer and 1 per door); keyed alike in same area.

Drawer guides: Knapp & Vogt - series #1300 or equal; 1 pair per drawer

Pulls: Stanley #4485 Aluminum X US28; 1 per door, 1 per drawer.

Adjustable Shelf Standards: Knapp & Vogt #255 (lengths as required) and
#239 shelf supports.

END OF SECTION

DIVISION 07 00 00

THERMAL AND MOISTURE PROTECTION

07 21 00 THERMAL INSULATION

1.00 GENERAL

- A. Submit product data, specifications and installation instructions.
- B. Deliver, handle and store products according to manufacturer's recommendations.
 - 1. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.

2.00 PRODUCTS

- A. Applications
 - 1. Insulation in Metal Framed Walls: Batt insulation (no vapor retarder).
 - 2. Insulation Above Lay-In Acoustical Ceilings: Acoustical Batt insulation (no vapor retarder).
- B. Glass Fiber Batt Insulation: Flexible, preformed batt or blanket, friction fit (ASTM C665).
 - 1. Flame Spread Index: 25 or less, (ASTM E84).
 - 2. Smoke Developed Index: 50 or less, (ASTM E84).
 - 3. Non-combustible (ASTM E136) except for facing, if any.
 - 4. Thermal Resistance: R=19.
 - 5. Thickness: 6.25 inch.
 - 6. Facing: Unfaced.
 - 7. Acceptable Manufacturers:
 - CertainTeed Corporation- "CertaPro AcoustaTherm Batts".
 - Guardian Fiberglass Insulation- "Unfaced Batts"
 - Johns Manville Corporation, "Unfaced Formaldehyde-free Thermal and Acoustical Fiber Glass Insulation" Owens Corning Corp: "Sonobatts Insulation".
- C. Acoustical Batt Insulation (Interior Walls and Above Ceilings) as shown on drawings.
 - 1. Glass fiber composition, unfaced, minimum 3-1/2" thick batt insulation, meeting:
 - ASTM E84: 25/50 or less Fire Hazard Classification.
 - ASTM C518: R-value of 3.20 per inch of thickness.
 - ASTM C665: Type I, Class B.
 - STC Rating: minimum 45.
 - 2. Acceptable Manufacturers:
 - CertainTeed Corporation –"Sound Control Batts"
 - Johns Manville Corporation –"Fiberglass Sound Control Batts"
 - Guardian Fiberglass Insulation –"Acoustical Sound Batts"
 - Owens Corning Corp.- "Sonobatts Insulation"

3.00 EXECUTION

- A. Batt Installation
 - 1. Install insulation and vapor retarder according to manufacturer's instructions.
 - 2. Install in exterior wall without gaps or voids.
 - Do not compress insulation.
 - 3. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.
 - 4. Install acoustical insulation in interior walls and above ceiling as indicated on drawings.

07 62 04 SHEET METAL FLASHING AND TRIM

1.00 GENERAL

- A. Submit manufacturer's product data, specifications and installation instructions.
- B. Submit samples not less than 6" x 6" indicating 1 - 90-degree bend, textures, workmanship and finishes for the completed work.
- C. Submit shop drawings for emergency overflow scuppers, parapet caps, pitch pans, counter flashing, flashing collars, expansion joints, seams, etc.
- D. Conform to the recommendations, specifications and standards of the following: "Architectural Sheet Metal Manual" by SMACNA.
- E. Coordinate sheet metal work with the installation of roofing, masonry, mechanical drains, piping, blocking, nailers, reglet, framing at openings, curbs, parapets and other adjoining and substrate work.
- F. Handle and store products according to manufacturer's recommendations and in a manner to prevent edge bends or other damage, deterioration and contamination.

2.00 PRODUCTS

- A. Prefinished Metal Flashing: Twenty-four (24) gage (minimum), galvanized steel; commercial quality, Fed. Spec. QQ-S-775, Type I, Class D or ASTM A 526 or lockforming quality ASTM A 527, G90 coating according to ASTM A 525.
- B. All sheet metal to be prefinished:
 - 1. Factory applied baked on two (2) coat system comprised of one (1) coat of full 70% resin fluorocarbon (polyvinylidene fluoride PVF2) by Kynar 500 or accepted substitute over a smooth coat of corrosion-resistant epoxy-based primer. Color selected by Architect from manufacture's standard and custom ranges.
 - 2. Finish at underside: a wash coat over a coat of corrosion-resistant epoxy-based primer.
- C. Provide nails, screws, rivets or other fasteners of same finish as flashing sheet or other non-corrosive fasteners recommended by sheet metal flashing manufacturer.

3.00 EXECUTION

- A. Comply with manufacturer's written instructions for particular conditions and requirements of installation. Install sheet metal flashing as indicated on the drawings.
- B. Shop fabricate sheet metal flashings (in shapes and with bends) as detailed, indicated on drawings or as required by and according to approved shop drawings.
- C. Provide for thermal expansion in running trim, flashing, valleys, gutters, expansion joints and other items exposed for more than 15'-0" continuous length. Maintain a watertight installation at expansion seams. Locate expansion seams at a maximum of 10'-0" apart.
- D. Fabricate and install work with lines and corners of exposed flashing and trim so that they are true and accurate. Form exposed faces flat and free of buckles, excessive waves and visible tool marks. Provide uniform, neat seams. Except as otherwise shown, fold back the sheet metal to form a hem on the concealed side of exposed edges.
- E. Conceal fasteners and expansion provisions wherever possible in exposed work, and locate so as to minimize the possibility of leakage. Cover and seal work as required for a watertight installation.
- F. Separation of Materials: Separate sheet metal from dissimilar metals by a course of 15# roofing felt wherever possible. Where felt application is not possible, coat the sheet metal or the other material with a 15-mil bituminous coating.

07 65 00 FLEXIBLE FLASHING

1.00 GENERAL

- A. Submit specifications, installation instructions and general recommendations from flashing materials manufacturer, for types of flashing products required.
- B. Coordinate flexible flashings with other work to ensure secure anchorage, watertight seals, and to minimize exposure to punctures or other damage.

2.00 PRODUCTS

- A. Flexible Flashing: Virgin, polyvinyl chloride membrane with plasticizers, UV stabilized; formed into uniform flexible sheets, non-reinforced, 20 mils thick (minimum) where completely concealed and 50 mils thick (minimum) where exposed to weather or the sun at any point.
- B. Sealants, mastics and other required material by the same manufacturer as membrane; or compatible with membrane and suitable for type installation required.

3.00 EXECUTION

- A. Install membrane flashing at areas as indicated on the drawings. Comply with manufacturer's instructions for handling and installation of membrane flashing materials.
- B. Extend flashings as shown to provide a complete membrane over the area indicated to be flashed. Seal to all projections through the sheet and seal all seams. Bond to vertical surfaces and where shown or recommended by manufacturer, bond to horizontal surfaces.
- C. Longitudinal laps are not allowed. Cross laps: 3" (minimum) sealed with sealant.

07 92 00 SEALANTS

1.00 GENERAL

- A. Submit samples indicating colors (for selection by the Architect) for the completed work. Submit manufacturer's product data, specifications and installation instructions for each product specified.
- B. Deliver, handle and store products according to manufacturer's recommendations and in a manner to prevent damage, deterioration and contamination.
- C. Do not install sealants under adverse weather conditions, or when temperatures are below or above those recommended by manufacturer.

2.00 PRODUCTS

- A. Exterior Sealants (Exposed to view): A one component, polyurethane, non-sag, elastomeric sealant; Acceptable Product: "Sonolastic" NP I or NP II; Color: Selected by Architect.
- B. Interior Sealants (Exposed to view): A one component, acrylic latex sealant; paintable; Acceptable product: "Sonolac"; Color: Selected by Architect from manufacturer's standard colors.
- C. Miscellaneous Materials:
 - 1. Provide type of joint cleaning compound recommended by sealant manufacturer, or joint surfaces to be cleaned.
 - 2. Sealant Backer Rod: Compressible rod stock polyethylene foam, polyethylene jacketed polyurethane foam, butyl rubber foam, neoprene foam or other flexible, permanent, durable non-absorptive material as recommended for compatibility with sealant-by-sealant manufacturer. Provide size and shape of rod, which will control the joint depth for sealant placement, break bond of sealant at bottom of joint, form optimum shape of sealant bead on backside, and provide a highly compressible backer to minimize the possibility of sealant extrusion when joint is compressed.

3.00 EXECUTION

- A. Clean joint surfaces immediately before installation of sealant. Remove dirt, insecure coatings, moisture and other substances, which would interfere with bond sealant. Prepare joint surfaces according to sealant manufacturer's instructions.
- B. Install sealant backer rod for sealants, unless otherwise recommended to be omitted by sealant manufacturer for application shown.
- C. Employ only proven installation techniques, which will ensure that sealants will be deposited in uniform, continuous ribbons without gaps or air pockets but with complete "wetting" of the joint bond surfaces equally on opposite sides. Fill sealant rabbet to slightly concave surface, slightly below adjoining surfaces.
- D. Install sealants to depths recommended by sealant manufacturer for specific conditions. At the centerline of the joint, the sealant depth should be no greater than one-half the joint width.

END OF SECTION

DIVISION 08 00 00

OPENINGS

08 11 13 HOLLOW METAL DOOR FRAMES

1.00 GENERAL

- A. Submit materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.
- B. Shop Drawings: Submit details of each new opening, showing elevations, glazing, frame profiles.
- C. Deliver, handle and store materials according to manufacturer's recommendations.
- D. Reference Standards
 - 1. ANSI A250.8 - SDI-100 Recommended Specifications for Standard Steel Doors and Frames.
 - 2. BHMA A156.115 - Hardware Preparation in Steel Doors and Steel Frames.
 - 3. DHI A115 Series - Specifications for Steel Doors and Frame Preparation for Hardware; Door and Hardware Institute.
 - 4. NFPA 80 - Standard for Fire Doors and Other Opening Protectives.
 - 5. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.

2.00 PRODUCTS

- A. Steel Doors Frames (Acceptable Manufacturers):
 - 1. Assa Abloy Ceko or Curries
 - 2. Rocky Mountain Metals, Inc.
 - 3. Steel Craft
- B. Requirements for All New Door Frames:
 - 1. Hardware Preparation: Meet BHMA A156.115, with reinforcement welded in place.
 - 2. Finish: Factory primed for field finishing.
 - 3. Hinge Reinforcement – 7-gauge min; Closer Reinforcement - 14-gauge min; Strike Reinforcement - 16-gauge min; Continuous Hinge Reinforcement - 7-gauge minimum full length.
- C. Steel Frames
 - 1. Comply with the requirements of grade specified for corresponding door; 16 gage material.
 - 2. Fabricate frames with mitered, welded corners. All intersections welded; factory primed for field finishing.
 - 3. Cut and prepare existing and new door frames for electric strikes as shown on the drawings.
- D. Accessory Materials
 - 1. Silencers: Resilient rubber, fitted into drilled hole; 3 on strike side of single door.
 - 2. Anchors: Three per jamb.

3.00 EXECUTION

- A. Install according to the requirements of the specified door grade standard and NAAMM HMMA 840.
- B. Install fire rated units according to NFPA 80.

08 14 00 WOOD DOORS

1.00 General

- A. Submit product Data: Indicate door core materials and construction; veneer species, type and characteristics.
- B. Submit shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.
- D. Coordinate the work with door opening construction, door frame and door hardware installation.

2.00 Products

- A. Acceptable Manufacturer's
Hardwood Faced Flush Wood Doors:
 - 1. Eggers Industries
 - 2. Poncraft Door Co
 - 3. VT Industries, Inc
- B. All Doors: See drawings for locations and additional requirements.
 - 1. Quality Level: Premium Grade with stain grade veneer.
 - 2. Paint Grade Hardwood Flush Faced Doors : 5-ply; Birch.
- C. Doors: 1-3/4 inches thick; flush construction; fire rated as indicated on the drawings.

3.00 Execution

- A. Install doors in according to manufacturer's instructions and specified quality standard.
- B. Coordinate installation of doors with installation of frames and hardware.
- C. Conform to specified quality standard for fit and clearance tolerances.
- D. Adjust doors for smooth and balanced door movement.
- E. Clearances:
 - 1. Maximum 1/8" at jamb and head for job fit doors; 3/16" for prefit doors.
 - 2. Maximum 3/16" at threshold or saddle; 1/2" over decorative floors without thresholds.

08 51 13 ALUMINUM WINDOWS

1.00 GENERAL

- A. Submit shop drawings including plans, layouts, elevations, schedules and details, which show general arrangement, dimensions, materials, and construction for the completed work. Include anchoring methods and adjacent materials.
- B. Submit manufacturer's product data, certification of Quality Assurance provisions, specifications and installation instructions for each product specified.
- C. Comply with structural performance, air infiltration, and water penetration requirements indicated in AAMA 101 for type, grade and performance class of window units required, and as further specified herein.
- D. Deliver, handle and store products according to manufacturer's recommendations. Prevent damage, deterioration and contamination.

2.00 PRODUCTS

- A. Single-Hung Windows; match existing with sizes as indicated on the drawings.
 - 1. Alenco, Division of Redman Industries, Inc.; Model 2500-DH-HC-40.
 - 2. EFCO Series 660 DH-HC-50 (Single Hung and Fixed).
 - 3. Kawneer Model 8425T SH (HC45).

- B. Provide window units that comply with requirements of AAMA Grade and Performance Class HC40, including operating force and deglazing test requirements specified in AAMA 101.
- C. Subframes: Provide panning subframes with anchors for window units of profile and dimensions indicated but not less than 0.062-inch-thick extruded aluminum. Miter or cope corners, and weld and dress smooth with concealed mechanical joint fasteners. Finish to match window units. Panning to cover the exposed sill, jamb and head construction and provide for proper caulking.
- D. Preglazed Fabrication: Preglaze window units at the factory. Comply with glass and glazing requirements of the "Glass and Glazing" sections of AAMA 101.
- E. Class II Anodized Finish: AA-M12C22A31 (Mechanical Finish: as fabricated, nonspecular; Chemical Finish: etched, medium matte; Anodic Coating: Class II Architectural, film thicker than 0.4 mil). Color to match existing (bronze).

3.00 EXECUTION

- A. Comply with manufacturer's written instructions for particular conditions and requirements of installation.
- B. Install according to approved shop drawings in areas as indicated on the drawings.

08 71 00 DOOR HARDWARE

1.00 General

- A. Submit manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project.
- B. Submit hardware schedule with detailed listing of each item of hardware to be installed on each door. Use door numbering scheme as indicated on the drawings. Identify electrically operated items and include power requirements.
- C. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention.
- D. Reference Standards
 - 1. TAS - Texas Accessibility Standards; current edition.
 - 2. BHMA A156.1 - American National Standard for Butts and Hinges; Builders Hardware Manufacturers Association, Inc.; 2006
 - 3. BHMA A156.3 - American National Standard for Exit Devices; Builders Hardware Manufacturers Association; 2008
 - 4. BHMA A156.4 - American National Standard for Door Controls - Closers; Builders Hardware Manufacturers Association, Inc.; 2008
 - 5. BHMA A156.13 - American National Standard for Mortise Locks & Latches Series 1000; Builders Hardware Manufacturers Association; 2012
 - 6. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames; Door and Hardware Institute; 2004.
 - 7. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors; Door and Hardware Institute; 1993; also in WDHS-1/WDHS-5 Series, 1996.
- E. Package hardware items individually, complete with all trim, screws, bolts, washers, etc.; label and identify each package with door opening code to match hardware schedule.

2.00 PRODUCTS

- A. Provide all hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.
- B. Provide all items of a single type of the same model by the same manufacturer.
- C. Hinges: Provide hinges on every swinging door as indicated on the drawings in the

hardware schedule.

1. Provide five-knuckle full mortise butt hinges unless otherwise indicated.
2. Provide ball-bearing hinges at all doors having closers.
3. Provide spring loaded hinges as scheduled..
4. Butt Hinges: Comply with BHMA A156.1 and A156.7; standard weight, unless otherwise indicated.
5. Quantity of Hinges Per Door: Three
6. Acceptable Products: Heavy duty full mortise stainless steel hinge.

Hager	BB1199
McKinney	T4A3386
Stanley	FB1199

D. Push/Pull: Comply with BHMA A156.6.

Provide push and pull-on doors not specified to have lockset, latch set, exit device, or auxiliary lock. On solid doors, provide matching push plate and pull plate on opposite faces.

1. Manufacturers - Push/Pulls:

Assa Abloy McKinney
Hager Companies
Rockwood Manufacturing Co.

E. Locks and Latches: Provide a lock for every door, unless specifically indicated as not requiring locking.

1. Hardware Sets indicate locking functions required for each door.
If no hardware set is indicated for a swinging door provide an office function type lockset.
2. Trim: Provide lever handle and anti-ligature type as scheduled.
3. Lock Cylinders: Provide key access on locks as scheduled.
Manufacturer's standard tumbler type, six-pin standard core.
4. Keying: Match Owner's existing keying system.
5. Latches: Provide a latch for every door that is not required to lock, unless specifically indicated "push/pull" or "not required to latch".

F. Cylindrical Locksets: Provide all cylinders for locksets, deadlocks, exit devices, and other control and locking devices indicated in Hardware Sets from one manufacturer.

G. Exit Devices

1. Locking Functions: Functions as defined in BHMA A156.3
2. Acceptable Products for touch bar design as scheduled in Hardware Sets with functions and trim as noted. Match existing.
3. Standards: ANSI A156.3, Grade 1.
UL listed for "Accident Equipment List - Panic Hardware" at exit assemblies.
UL listed for "Fire Exit Hardware" at labeled assemblies.

H. Closers: Comply with BHMA A156.4.

1. Provide surface-mounted, door-mounted closers as indicated on the drawings.
2. Standard: ANSI A156.4, Grade 1.
3. No closer arms visible on the sight side of the doors (typically from the corridor side) or on the exterior of the building.

I. Stops and Holders: Complying with BHMA A156.8; provide a wall stop for every swinging door.

1. Door Stops: Acceptable Manufacturers:
Assa Abloy Rixson or Sargent
Rockwood Manufacturing Co
Triangle Brass Manufacturing Co., Inc., (Trimco)
Provide doorstops at each door leaf

- J. Finishes: Except where indicated otherwise in Hardware Sets, comply with following:
Typically: 626, 652 (US26D) Stain Chrome or 630 (US32D) Stain Stainless Steel.
Surface Mounted Closers: Spray-painted to match other hardware.

3.00 EXECUTION

- A. Install hardware according to manufacturer's instructions and applicable codes.
- B. Use templates provided by hardware item manufacturer.
- C. Install hardware on fire-rated doors and frames according to code and NFPA 80.
- D. Mounting heights for hardware from finished floor to centerline of hardware item: As shown on drawings.
 - 1. For steel doors and frames: Comply with DHI "Recommended Locations for Architectural Hardware for Steel Doors and Frames."
 - 2. For wood doors: Comply with DHI "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- E. Install finish hardware plumb, level and true to line.
- F. Thru-bolt all closers.
- G. Check and adjust each operating hardware item to ensure proper operating or function of unit. Adjust all closers to comply with TAS Requirements.
- H. Hardware Schedule: Refer to the drawings.

END OF SECTION

DIVISION 09 00 00

FINISHES

09 21 16 GYPSUM BOARD ASSEMBLIES

1.00 GENERAL

- A. Submit manufacturer's product data, specifications and installation instructions.
- B. Conform to codes, specifications, recommendations and standards:
 - 1. ANSI A108.11 - American National Standard for Interior Installation of Cementitious Backer Units
 - 2. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board
 - 3. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members
 - 4. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products
 - 5. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board
 - 6. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
 - 7. ASTM C1280 - Standard Specification for Application of Gypsum Sheathing
 - 8. ASTM C1396/C1396M - Standard Specification for Gypsum Board
 - 9. ASTM C1658/C1658M - Standard Specification for Glass Mat Gypsum Panels
 - 10. GA-216 - Application and Finishing of Gypsum Board; Gypsum Association; 2013.
 - 11. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.
- C. Perform according to ASTM C 840. Comply with requirements of GA-600 for fire-rated assemblies. Provide complete drywall systems, including gypsum board, framing, and accessories from one manufacturer.
- D. Conform to applicable code for fire rated assemblies as indicated on drawings.
- E. Deliver materials to project site with manufacturer's labels intact and legible. Deliver fire-rated materials bearing testing agency label and required fire classification numbers. Store materials under cover in dry area, off floor.

2.00 PRODUCTS

- A. Gypsum Board Assemblies:
 - Completed assemblies meet ASTM C840 and GA-216. Interior Partitions (Acoustic): Completed assemblies meet STC of 45-49. Fire Rated Assemblies: Completed assemblies meet applicable codes.
- Metal Framing and Materials:
 - 1. Acceptable Manufacturers - Metal Framing, Connectors, and Accessories: Clark Dietrich Building Systems.
 - 2. Non-Loadbearing Framing System Components: ASTM C645; galvanized; of size as shown; comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf. Studs: "C" shaped with flat or formed webs; Runners: U shaped, sized to match studs; Ceiling Channels: C shaped; Furring: Hat-shaped sections, minimum depth of 7/8 inch.
 - 3. Ceiling Hangers: Type and size as specified in ASTM C754 for spacing required.
 - 4. Concealed Suspension System: See Section 09 51 00 - Acoustical Ceilings.
 - 5. Partition Head to Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and fastened as indicated on drawings. Product: Clark Dietrich Building Systems "Max Trak".
- B. Board Materials

1. Acceptable Manufacturers - Gypsum-Based Board:
Georgia-Pacific Gypsum
National Gypsum Company
USG Corporation
 2. Wallboard (Type III): Paper-faced gypsum wallboard as defined in ASTM C 1396/C 1396M; size to minimize joints; ends square cut; 5/8 inch thick. Use for vertical surfaces and ceilings, unless otherwise indicated. Provide mold-resistant board when installed before the building is enclosed and conditioned.
At Fire-Rated Assemblies: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.
Acceptable Paper-Faced Products:
Georgia-Pacific Gypsum; "ToughRock", "ToughRock Fireguard", and "ToughRock FireGuard C Gypsum Wallboard".
National Gypsum Company; "Gold Bond Brand Gypsum Wallboard".
USG Corporation; "Sheetrock Brand Gypsum Panels".
 3. Backing Board for Tile Areas (Type V): "GREENBOARD" is PROHIBITED.
Application: Surfaces behind tile areas including shower ceilings and shower surrounds. Use for vertical and horizontal surfaces behind thin set tile.
Mold Resistance: Score of 10 (ASTM D3273).
ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325. Thickness: 5/8 inch.
Acceptable Products: National Gypsum Company; "PermaBase Brand Cement Board" and USG Corporation "Durock Brand Cement Board".
Glass-Mat-Faced Board: Coated glass mat water-resistant gypsum backing panel (ASTM C1178).
Fire-Resistant Type: Type X core, thickness 5/8 inch.
Acceptable Products:
Georgia-Pacific Gypsum "DensShield Tile Backer".
National Gypsum Company "Gold Bond eXP Tile Backer".
- C. Accessories:
1. ASTM C1047, galvanized steel or rolled zinc, unless otherwise indicated.
Types: As detailed or required for finished appearance.
Corner Beads: Durabead No. 103 or equal.
Casing Beads: No. 200-A or equal.
Control Joints: Keene's No. 40 or equal.
Special Shapes: In addition to conventional cornerbead and control joints, provide U-bead at exposed panel edges.
 2. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer.
Sheathing Joint Tape: 4-inch minimum wide, rubberized asphalt-waterproofing element laminated to a 4-mil cross-laminated polyethylene film, 30 mil minimum total thickness. Provide product compatible with the weather barrier product to be installed, substantially equivalent to the following.
Product: Polyguard Products, Inc. "400 TWF".
Tape: 2-inch wide, coated glass fiber tape for joints and corners.
Ready-mixed vinyl-based joint compound.
Chemical hardening type compound.
 3. Textured Finish Materials: Latex-based compound; plain.

3.00 EXECUTION

A. Framing Installation:

1. Install Metal Framing according to ASTM C754 and manufacturer's instructions.
2. Suspended Ceilings and Soffits:
Space framing and furring members at 16 inches o.c.
Laterally brace entire suspension system.
Install ceiling framing independent of walls, columns and above ceiling.
Locate members within 6 inches of walls.
Unless indicated otherwise, use 1-1/2 inch cold-rolled channels main framing (2 inch on double layer board) at 48 inches on center with furring channels run perpendicular at 16 inches on center.
3. Space studs at 16 inches (Max.).
At Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.
4. Reinforce openings with double studs at jambs.
5. Install wall furring at concrete and masonry walls scheduled to receive gypsum board.
Furring for Fire Ratings: meet requirements for fire resistance ratings indicated.
6. Alternative to Blocking: Furnish and install heavy gage steel (12 gage x 6" wide) backer plates across face of metal studs for anchoring handrails, fixtures and grab bars at drywall partitions.

B. Installation Acoustic Accessories:

1. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.
2. Acoustic Sealant: Install according to manufacturer's instructions. Place continuous bead at perimeter of each layer of gypsum board.

C. Installation Board and Glass Mat Faced Board:

1. Comply with ASTM C 840 and manufacturer's instructions.
2. Fire-Rated Construction: Install gypsum board in strict compliance with requirements of assembly listing.
3. Exterior Sheathing: Comply with ASTM C1280. Install sheathing vertically, with edges butted tight and ends occurring over firm bearing.
For Paper-Faced Sheathing: Protect from weather by application of water-resistive barrier (immediately after installation).
4. Ceramic Tile Backer Board: Install over steel framing members and plywood substrate where indicated, according to ANSI A108.11 and manufacturer's instructions. Install over layer of #15 felt in shower walls.

D. Installation Trim and Accessories

1. Control Joints: Place control joints consistent with lines of building spaces and as indicated. Control joint placement where shown on drawings takes precedence over spacing limitations specified here.
Not more than 20 feet apart on inside of exterior walls;
Not more than 30 feet apart on interior walls and ceilings over 50 feet long;
At exterior soffits, not more than 30 feet apart in both directions.
At the heads of all door and window openings, aligned with jambs, run continuous to the top of the gypsum board above ceiling and from window sills continuous to floor. Use

Keene's #093

At changes in back-up material.

Provide fire resistant protections behind expansion/control joints in fire rated assemblies.

2. Corner Beads: Install at external corners.

3. Edge Trim: Install where gypsum board abuts dissimilar materials.

E. JOINT TREATMENT

1. Glass Mat Faced Gypsum Board and Exterior Glass Mat Faced Sheathing: Tape exterior sheathing joints in addition to weather resistant membrane (water drainage in wall cavity). Use fiberglass joint tape, bedded and finished with chemical hardening type joint compound.

2. Paper Faced Gypsum Board: Use fiberglass joint tape, bedded with ready-mixed vinyl-based joint compound and finished with ready-mixed vinyl-based joint compound.

F. Finish gypsum board according to levels defined in ASTM C840 and as follows:

Level 4: Walls and ceilings to receive paint finish or wall coverings.

Level 1: Wall areas above finished ceilings.

G. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.

H. Wall Texture: By Owner

I. Tolerances: Maximum Variation (Finished Gypsum Board Surface) 1/8 inch in 10 feet. Conform to the following for determining Interior stud gauge based on maximum unbraced length.

09 30 00 CERAMIC TILE

1.00 GENERAL

A. SECTION INCLUDES

1. Tile for interior floor and wall applications.
2. Tile mortar and grout.
3. Tile trim and accessories.

B. REFERENCE STANDARDS

ANSI A108 Series/A118 Series/A136.1 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2013.1.

1. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2013.1.
2. ANSI A108.1b - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex Portland Cement Mortar; 2013.1.
3. ANSI A108.5 - American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 2013.1.
4. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 2013.1.
5. ANSI A108.11 - American National Standard for Interior Installation of Cementitious Backer Units; 2013.1.
6. ANSI A118.4 - American National Standard Specifications for Latex-Portland Cement Mortar; 2013.1.
7. ANSI A118.10 - American National Standard Specifications for Load Bearing,

C. TCNA (HB) - Handbook for Ceramic Tile Installation; Tile Council of North America, Inc.

- D. SUBMITTALS - see section 01 30 02 Submittals
 - 1. Product Data: Provide manufacturers' data sheets on tile, mortar, grout, and accessories. Include installation instructions for using grouts and adhesives.
 - 2. Samples: 4 to 6 full size tile pieces illustrating pattern and color variations.
 - 3. Maintenance Data: Include recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.
 - 4. Maintenance Materials:
 - a. Extra Tile (Owner's "Attic Stock": 3 percent of each size, color, and surface finish combination, but not less than 1 full carton of each type.
 - 5. Color grout samples (color charts not acceptable).
- E. QUALITY ASSURANCE
 - 1. Installer Qualifications: Company specializing in performing tile installation, with minimum of 5 years of documented experience.
- F. DELIVERY, STORAGE AND HANDLING
 - 1. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Prevent damage or contamination to materials by water, freezing, foreign matter or other causes.

2.00 PRODUCTS

- A. CERAMIC TILE
 - 1. Acceptable Manufacturers: Daltile Corporation:
 - 2. Interior Wall Tile Allowance:
Include the sum of **Nine dollars (\$9.00) per square foot** of area indicated on the drawings to receive "interior wall tile."
 - 3. Interior Floor Tile Allowance:
Include the sum of **Nine dollars (\$9.00) per square foot** of area indicated on the drawings to receive "interior floor tile."
 - 4. The allowance amount **includes** the following "actual cost" items:
 - 1. Ceramic Tile Materials (as selected by the Architect).
 - 2. Adhesives and miscellaneous installation materials.
 - 3. Delivery to the job site.
 - 4. Storage at the job site (if required)
 - 5. State and local sales taxes (**not applicable** since Owner is a 501C3 "Non-Profit").
 - 6. Warranty
 - 7. Installation and labor costs by the installer or sub-contractor.
 - 8. General Contractor's overhead and mark-up.
 - 5. Provide documentation (satisfactory to the Architect) as verification of "actual cost" of materials included in allowance amount. Should the "actual cost" of materials be greater than or less than the allowance amount, the Contract Sum will be adjusted accordingly.
 - 6. Ceramic Trim: None
 - 7. Non-Ceramic Trim: Provide brushed stainless steel, style and dimensions to suit application, for setting using tile mortar or adhesive.
 - a. Applications: Vertical outside wall corners: RONDEC by Schluter.
- B. SETTING MATERIALS
 - 1. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4.
Acceptable Products:
ARDEX Engineered Cements; ARDEX X 77 MICROTEC;
LATICRETE International, Inc; LATICRETE 254 Platinum

MAPEI Corporation; Ultraflex 3

2. Organic Adhesive: ANSI A136.1, thinset mastic type.

Acceptable Products:

ARDEX Engineered Cements; ARDEX D14

LATICRETE International, Inc; LATICRETE 15 Premium Mastic

MAPEI Corporation; Type 1 Adhesive (dry-areas only)

C. GROUTS

1. Manufacturers:

ARDEX Engineered Cements

ProSpec, an Oldcastle brand

Custom Building Products

LATICRETE International, Inc

Merkrete, by Parex USA, Inc

2. Polymer Modified Portland Cement Grout: ANSI A118.7 polymer modified cement grout.

Applications: Use this type of grout where indicated and where no other type of grout is indicated.

Use sanded grout for joints 1/8-inch-wide and larger; use unsanded grout for joints less than 1/8 inch wide.

Color(s): As selected by Architect from manufacturer's full line.

Acceptable Products:

ARDEX Engineered Cements; ARDEX FG-C MICROTEC:

LATICRETE International, Inc; LATICRETE PermaColor

Custom Building Products; Prism SureColor:

Merkrete, by Parex USA, Inc; Merkrete Non-Sanded Color Grout

ProSpec; ProColor Sanded Tile Grout

3. Grout Sealer: Liquid-applied, moisture and stain protection for Portland cement grout.

D. THIN-SET ACCESSORY MATERIALS

1. Waterproofing Membrane at Floors: Specifically designed for bonding to cementitious substrate under thick mortar bed or thin-set tile; complying with ANSI A118.10.

a. Type: Fluid-applied; 30 mils, minimum, dry film thickness.

b. Acceptable Products:

ARDEX Engineered Cements; ARDEX 8+9

Custom Building Products; RedGuard Waterproofing and Crack Prevention Membrane:

LATICRETE International, Inc; LATICRETE Hydro Ban

Merkrete, by Parex USA, Inc.; Merkrete Hydro Guard 2000:

3.00 EXECUTION

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.
- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of setting materials to sub-floor surfaces.

B. INSTALLATION - GENERAL

1. Install tile and thresholds and grout according to applicable requirements of ANSI

A108.1 through A108.13, manufacturer's instructions, and The Tile Council of North America Handbook recommendations.

2. Lay tile to pattern indicated on Architect's Finish Schedule. Pattern should break at door openings unless noted to continue through opening. On wall patterns, tile should continue around jogs in wall and around corners unless specifically noted otherwise. If patterns must be slightly adjusted to work with cut sizes or coordinate with openings, make pattern breaks at inside corners or at door openings only. Notify Architect of questions in layouts and break or adjustment lines.
 3. Layout across wall or floor so that there is no tile less than 1/2 tile or 3" whichever is smaller. Notify Architect for specific directions if this affects a design or pattern.
 4. Where floor and wall tile are the same size, align floor tile joints with wall tile vertical joints. Align joints of accent banding tile with adjacent wall or floor tile. Notify Architect of questions concerning joint layout and alignment.
 5. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
 6. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
 7. "Sound" test tile after setting. Replace hollow sounding units.
 8. Keep control joints free of adhesive or grout. Apply backer rod and sealant in control joints.
 9. Prior to grouting, allow installation to completely cure; minimum of 48 hours.
 10. Grout tile joints. Use standard grout unless otherwise indicated.
 11. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.
 12. Caulk inside corners of wall intersections with full bead of sealant.
 13. Caulk between ceramic tile and door or window frames.
- C. CLEANING AND PROTECTION
1. Clean tile and grout surfaces. Clean grout or mortar from expansion and control joint assemblies which remain exposed and other finishes or surfaces adjacent to ceramic tile finish.
 2. Sponge and wash tile thoroughly, diagonally across joints. Polish with clean dry cloths and leave thoroughly clean. Use of acid is prohibited.
 3. Do not permit traffic over finished floor surface for 4 days after installation.

09 51 00.1 ACOUSTICAL CEILINGS

1.00 GENERAL

- A. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels; 2008.
ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2011.
ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2008e1.
UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.
- B. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust-generating activities have terminated, and overhead work is completed, tested, and approved.

- C. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

2.00 PRODUCTS

- A. Acoustical Units - Acceptable Manufacturers:
Armstrong World Industries, Inc:
USG Interiors, Inc.:
- B. Acoustical Tile: match existing.
- C. Suspension System Acceptable Manufacturers: match existing.
Armstrong World Industries, Inc
Chicago Metallic Corporation
USG Interiors, Inc.
- D. Perimeter Moldings: Same material and finish as ceiling grid.

3.00 EXECUTION

- A. Install suspension system according to ASTM C 636/C 636M, ASTM E 580/E 580M, and manufacturer's instructions.
- B. Rigidly secure system; maximum deflection of 1:360.
- C. Install after major above-ceiling work is complete.
- D. Hang suspension system independent of walls, columns, ducts, pipes and conduit.
- E. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- F. Install acoustical units according to manufacturer's instructions. Modify existing system as required. Replace damaged ceiling tile. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function. Fit border trim neatly against abutting surfaces.
- G. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- H. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

09 65 00.1 RESILIENT FLOORING (LVT) AND BASE

1.00 GENERAL

- A. Submit manufacturer's product data, specification and installation instructions.
- B. Submit manufacturers complete set of color samples for Architect's selection.
- C. Reference Standards: ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- D. Prior to installation, store materials for 48 hours in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain temperature above 55 degrees.

2.00 PRODUCTS

- A. Floor tile – Acceptable Manufacturer's:
 - 1. Armstrong
 - 2. Roppe
 - 3. Products by Mohawk are **not** acceptable
- B. RESILIENT FLOORING ALLOWANCE
 - 1. Include the lump sum **Material Allowance of Eight Dollars (\$8.00) per square foot** of area covered for materials as indicated on the drawings.
 - 2. The material Allowance figure covers **only the "actual cost" of the following items:**
 - a. Materials (as selected by the Architect).

- b. Accessories, adhesives trim and miscellaneous installation materials.
- c. Delivery to the job site.
- d. Storage at the job site (if required).
- e. State and local sales tax (not applicable since Owner is a 501 (c) 3 "Non-Profit")
- f. Warranty
- g. Installation and labor costs by the installer or sub-contractor.
- h. General Contractor's overhead and mark up.
- 3. Provide documentation (satisfactory to the Architect) for verification of material quantities and of "actual costs" to be deducted from the Material Allowance amount. Should the "actual cost" of materials as selected be greater than or less than Material Allowance amount, the Contract Sum will be adjusted accordingly at project close-out.
- C. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set, Cove: 4 inch high; 0.125-inch thick; Satin finish; Roll lengths; Color match existing. Acceptable Manufacturers: Johnsonite; Roppe Corp.

3.00 EXECUTION

- A. Verify that sub-floor surfaces are smooth and flat within 1/8 in. 10 ft. tolerance.
- B. Remove sub-floor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
- C. Install flooring according to manufacturer's instructions.
- D. Fit joints tightly. Set flooring in place; press with heavy roller to attain full adhesion.
- E. Where types of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.
- F. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
- G. Install tile in as directed by Architect.
- H. Fit base & trim joints tightly and make vertical. Maintain minimum length between joints, 24 inches apart.
- I. Install base on solid backing. Bond tightly to wall and floor surfaces.
- J. Do **not** cut base cove.

09 90 00 PAINTING (WALL TEXTURE & PAINTING PROVIDED BY OWNER)

1.00 GENERAL

- A. Submit product data, Provide manufacturer's instructions including special surface preparation procedures and substrate conditions requiring special attention.
- B. Deliver products to site in sealed and labeled containers. Handle and store according to manufacturer's requirements.

2.00 PRODUCTS

- A. Acceptable Manufacturer's: Sherwin-Williams Company (SW) or Architect's approved equivalent.
- B. Paint Schedule - Interior:
 - 1. Wood:
 - Primer: Alkyd Enamel undercoat, minimum 2 mils DFT. (Omit primer at existing surfaces to be repainted)
 - SW ProBlock Interior Oil-Based Primer #B79W8810.
 - First Coat: Vinyl Acrylic first coat, minimum 1.5 mils DFT, available in manufacturer's full range of tinted colors.
 - N539 Semi-Gloss Enamel MPI # 43.
 - SW ProMar 200 Zero VOC Interior Latex Semi-Gloss #B31W2600 series.

- Top Coat: Vinyl Acrylic top coat, minimum 1.5 mils DFT, available in manufacturer's full range of tinted colors.
Semi-Gloss Enamel MPI # 43.
SW ProMar 200 Zero VOC Interior Latex Semi-Gloss #B31W2600 series.
2. Wood Doors:
Primer: None
First and Second coats:
Lacquer; match existing
3. Gypsum Board:
Primer: (Omit primer at existing surfaces to be repointed)
SW ProMar 200 Zero VOC Interior Latex Semi-Gloss #B31W2600 series.
Top Coat: Vinyl Acrylic topcoat, minimum 1.5 mils DFT, available in manufacturer's full range of tinted colors.
Semi-Gloss Enamel MPI # 43.
SW ProMar 200 Zero VOC Interior Latex Semi-Gloss #B31W2600 series.
4. Metal:
Primer: Alkyd resin base, rust inhibitive primer, white or off-white color, minimum 3 mils DFT. (Omit primer at existing surfaces to be repainted)
SW Kem Kromik Universal Metal Primer #B50Z.
First Coat: Polyamide Epoxy first coat, minimum 3 mils DFT.
5. Galvanized Metal:
Primer: Acrylic based primer for galvanized surfaces, minimum 2.5 mils DFT. (Omit primer at existing surfaces to be repointed)
SW Pro-Cryl Universal Acrylic Metal Primer #B66-310 Series.
First Coat (acrylic): Acrylic epoxy first coat, minimum 2.5 mils DFT.
- C. Texture Finish - By Owner: Apply finish texture coating by means of spraying apparatus
Texture to match existing.
- D. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.
Patching Material: Latex filler.
Fastener Head Cover Material: Latex filler.
Wood filler for transparent wood finished.

3.00 EXECUTION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is acceptable.
- B. Clean surfaces, correct defects and prepare surfaces using the methods recommended by the manufacturer.
- C. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- D. Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.
- E. Seal surfaces that might bleed through topcoat.
- F. At interior wood surfaces to receive transparent finish, wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats. Prime concealed surfaces.
- G. At wood doors (to be field-finished): Seal wood door top and bottom edge surfaces

- with clear sealer.
- H. Apply products according to manufacturer's instructions.
 - I. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.
 - J. Provide edges of paint adjoining other materials or colors that are sharp and clean with no overlapping.

END OF SECTION

DIVISION 10 00 00

SPECIALTIES

10 14 01.2 INTERIOR SIGNS

1.00 GENERAL

- A. Codes and Reference Standards - Conform to the codes, recommendations, specifications, and standards of the following:
 - 1. Texas Accessibility Standards (TAS Handicapped Requirements).
 - 2. Applicable local and state codes and regulations.
- B. Shop Drawings including elevations, schedules and details which show general arrangement, dimensions and materials, for the completed work. Include anchoring systems and adjacent materials. Manufacturer's product data, specifications and installation instructions for each product specified.
- C. Handle and store products according to manufacturer's recommendations; prevent damage, deterioration and contamination.

2.00 PRODUCTS

- A. Include the sum of **sixty dollars (\$60.00) per interior** sign at each interior door opening which leads into an interior occupied space.
- B. The Allowance amount includes the following items:
 - 1. Sign materials (as selected by Architect)
 - 2. Accessories adhesives and other required installation materials.
 - 3. Delivery to the job site.
 - 4. Storage other than at the job site (if required).
 - 5. State and local sales taxes.
 - 6. Warranty
 - 7. Installation and labor costs by the installer or sub-contractor.
 - 8. General Contractor's overhead and mark-up.
- C. Provide documentation (satisfactory to the Architect) as verification of costs included in Allowance. Should the cost of signs materials be greater than or less than the Allowance amount the Contract Sum will be adjusted accordingly.

3.00 EXECUTION

- A. Install according to approved shop drawings and samples in locations as indicated on the drawings.
- B. Install on walls (adjacent to doors) 8" (max.) from the door jamb and 60" above the floor.
- C. Comply with requirements of the Texas Accessibility Standards.

10 28 00.1 TOILET ACCESSORIES

1.00 GENERAL

- A. Submit product data on accessories describing size, finish, details of function, attachment methods. Submit manufacturer's installation instructions.

2.00 PRODUCTS

- A. Toilet Accessories(Acceptable Manufacturers)
 - 1. American Specialties, Inc
 - 2. Bradley Corporation
 - 3. Bobrick Washroom Equipment
 - 4. Gamco (A Division of Bobrick)

- B. Stainless Steel Sheet: ASTM A666, Type 304.
- C. Stainless Steel Tubing: ASTM A269, Type 304 or 316.
- D. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.
- E. Fasteners, Screws, and Bolts: Hot dip galvanized, tamper-proof, security type.
- F. Refer to the drawings for schedule of toilet accessories.

3.00 EXECUTION

- A. Install accessories according to manufacturer's instructions.
- B. Install plumb and level, securely and rigidly anchored.
- C. Locate accessories where indicated on the plans or as follows (as a minimum):
 - One toilet paper dispenser per water closet.
 - Two grab bars (36" and 42") per each accessible stall or toilet.
 - One framed mirror, minimum, per each lavatory fixture.
- D. Mounting Heights and Locations: As required by TAS/ADA accessibility regulations and as indicated on drawings.

END OF SECTION

DIVISION 21 00 00

FIRE SUPPRESSION

21 13 10 FIRE PROTECTION & SPRINKLER SYSTEMS

1.00 GENERAL

- A. Modify the existing Wet-Pipe Sprinkler System in areas of the building as indicated on the drawings.
- B. Sprinkler System design to be approved by authorities having jurisdiction (City of Midland) and owner's insurer.
 - 1. Sprinkler Occupancy Hazard Classifications:
 - a. Building service areas, general storage areas: Ordinary Hazard, Group 1
 - b. Offices, public common areas, restrooms, functional support (non-mechanical/electrical areas), Light Hazard
 - c. Electrical equipment Rooms: Ordinary Hazard, Group 1
 - d. General storage area: Ordinary Hazard, Group 1
 - e. Mechanical Equipment Rooms: Ordinary Hazard
 - 2. Minimum Density for Automatic-Sprinkler Piping Design: Per current edition of NFPA-13
 - 3. Maximum Protection Area per Sprinkler: Per UL listing.
 - 4. Total Combined Hose-Stream Demand Requirement: According to NFPA 13 unless otherwise indicated.
- C. SUBMITTALS
 - 1. Product Data: For each type of product indicated.
 - 2. Shop Drawings: For modifications to existing wet-pipe sprinkler systems. Include plans, elevations, sections, details, and attachments to other work.
 - 3. Approved Sprinkler Piping Drawings: Drawings prepared according to NFPA 13, that have been approved by authorities having jurisdiction.
 - 4. Field Test Reports and Certificates: Indicate and interpret test results for compliance with performance requirements and as described in NFPA 13. Include "Contractor's Material and Test Certificate for Aboveground Piping."
- D. Installer Qualifications: Installer's responsibilities include designing, fabricating, installing, and commissioning the sprinkler systems. All must be approved by the qualified jurisdictional entry. Base calculations on results of fire-hydrant flow test.
- E. NFPA Standards: Sprinkler system equipment, specialties, accessories, installation, and testing to comply with NFPA 13, "Installation of Sprinkler Systems." Current edition.

2.00 PRODUCTS

- A. Piping Materials: Match Existing.
- B. Pipe and Fittings: Match Existing.
- C. Fire-Protection Valves: Match Existing.
- D. Trim and Drain Valves: Existing to Remain.
- E. Fire-Department Connections: Existing to Remain.
- F. Sprinklers: Match Existing.
- G. Alarm Devices: Existing to Remain.

3.00 EXECUTION

- A. Service-Entrance Piping: Existing to Remain.
- B. Water-Supply Connections: Existing to Remain.

- C. Piping Installation:
 - 1. Piping Standard: Comply with requirements for installation of sprinkler piping in NFPA 13, current edition.
 - 2. Use approved fittings to extend existing, to make changes in direction, branch takeoffs from mains, and reductions in pipe sizes.
 - 3. Install sprinkler piping with drains for complete system drainage.
 - 4. Provide and install hangers and supports for sprinkler system piping according to NFPA 13.
 - 5. Fill completed sprinkler piping with water.
- D. Joint Construction:
 - 1. Install coupling, flanges, flanged fittings, unions, nipples, transition and special fitting that have finish and pressure ratings same as or higher than existing system's pressure rating for aboveground applications unless otherwise indicated.
- E. Sprinkler Installation:
 - 1. Install sprinklers in suspended ceilings in center of narrow dimension of acoustical ceiling panels and as indicated on the drawings.
 - 2. Do not install pendent or sidewall wet-type sprinklers in area subject to freezing.
- F. Fire-Department Connection Installation: Existing to Remain.
- G. Field Quality Control:
 - 1. Perform required tests and inspections.
 - 2. Tests and Inspections:
 - a. Leak Test: After installation, charge systems and test for leaks. Repair leaks and retest until no leaks exist.
 - b. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
 - c. Flush, test, and inspect sprinkler systems according to NFPA 13, "Systems Acceptance" Chapter.
 - d. Coordinate with fire-alarm tests. Operate as required.
 - 3. Sprinkler piping system will be considered defective if it does not pass tests and Inspections.

END OF SECTION

22 00 00

PLUMBING

1.00 GENERAL

- A. For new plumbing components, submit manufacturer's product data and installation instructions.
- B. This project qualifies for an exemption to Chapter C408.2 of the 2018 IECC as the HVAC and Service Water Heating system capacities are below the minimum requirements.
- C. Submit shop drawings. Include piping layout schedules and details showing general arrangement, materials, dimensions and construction for the completed work. Indicate adjacent materials and anchoring methods.
- D. Plumbing modifications to comply with the International Mechanical Code, NFPA 90, and all Local, State, and Federal Ordinances, Codes, Laws, and Regulations.
- E. Deliver materials to the job site in manufacturer's original packaging with manufacturer and product name clearly indicated.
- F. Store materials in a manner to prevent damage, deterioration or contamination.

2.00 PRODUCTS

- A. Description: Unless otherwise specified, provide modifications to existing as shown on the drawings or required by Codes. New materials and construction to match existing unless otherwise indicated.
- B. Miscellaneous materials: Provide all trim, supports, fasteners, clips, adhesives, sealants, tape or other items required to produce the desired finished installation.

3.00 EXECUTION

- A. Install materials (in areas as indicated on the drawings) according to manufacturer's installation instructions and recommendations.
- B. Install according to approved submittals.
- C. Contractor verify location and size of existing Utility Services. Demo existing (as required). Extend new plumbing and tie into existing; match existing.
- D. Plumbing sub verify piping sizes. Provide piping design layout, fixture and trim specs for Architect's approval; match existing.
- E. Provide and install plumbing valves, lines, fixtures, faucets, trim, etc. as required.
- F. Contractor ensure plumbing installation complies with local backflow requirements (if any). Contractor provide and install additional backflow devices (not shown on these drawings) as required by Local Codes.
- G. Pressure test utility lines for leaks prior to cover up.
- H. Provide plumbing fixtures scheduled (or match existing if not scheduled) at locations indicated.
- I. Provide sanitary waste and vent piping as indicated and required.
- J. Where multiple fixtures share a common wall, provide branch piping to each fixture. Size piping as required by the plumbing fixture and equipment.
- K. Extend HW loop down in walls as required. Provide HW branches to faucets within 24" of HW loop.
- L. Provide CW, HW, HWR piping above ceiling high in attic; insulate as required.
- M. Provide condensate drain line from re-located mechanical unit into floor drain.

END OF SECTION

PERMIACARE – 400 N. CARVER
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22 00 00
PLUMBING

23 00 00

MECHANICAL

1.00 GENERAL

- A. For new HVAC equipment and components, submit manufacturer's product data and installation instructions.
- B. This project qualifies for an exemption to Chapter C408.2 of the 2018 IECC as the HVAC cooling/heating system capacities are below the minimum requirements.
- C. Submit shop drawings. Include duct layout schedules and details showing general arrangement, materials, dimensions and construction for the completed work. Indicate adjacent materials and anchoring methods.
- D. HVAC modifications to comply with the International Mechanical Code, NFPA 90, and all Local, State, and Federal Ordinances, Codes, Laws, and Regulations.
- E. Deliver materials to the job site in manufacturer's original packaging with manufacturer and product name clearly indicated.
- F. Store materials in a manner to prevent damage, deterioration or contamination.

2.00 PRODUCTS

- A. Description: Unless otherwise specified, provide modifications to existing as shown on the drawings or required by Codes. New materials and construction to match existing, unless otherwise indicated.
- B. Fire Dampers (if required) equal to Ruskin DIBD20, Style B, Dynamic.
- C. Miscellaneous materials: Provide all trim, supports, fasteners, clips, adhesives, sealants, tape or other items required to produce the desired finished installation.

3.00 EXECUTION

- A. Install materials (in areas as indicated on the drawings) according to manufacturer's installation instructions and recommendations.
- B. Install according to approved submittals.
- C. Refer to Architectural Reflected Ceiling Plan for location of ceiling mounted light fixtures and air distribution devices. Coordinate as required to avoid conflicts.
- D. Duct dimensions (when shown) represent net inside clearances. New ductwork construction to match existing. Fabricate new Galvanized Sheet Metal in accordance with Smacna guidelines. Insulated as required by International Energy Conservation Code.
- E. Provide manual Balancing Dampers in new or modified supply ducts at each supply grille/diffuser.
- F. When complete, balance Air Systems.
- G. Ensure 10'-0" clearance between fresh air inlets and all exhaust outlets and plumbing vents. Offset fresh air ducts and/or plumbing vent lines as necessary.
- H. Locate thermostats a minimum of six inches from wall corners, door frames, and other devices. Mount thermostats at 48" A.F.F. Coordinate the location of all thermostats with Architect prior to insulation.

END OF SECTION

26 00 00

ELECTRICAL

1.00 GENERAL

- A. For new electrical equipment and components, submit manufacturer's product data and installation instructions.
- B. This project qualifies for an exemption to Chapter C408.2 of the 2018 IECC as the HVAC service water/heating system capacities are below the minimum requirements.
- C. Submit shop drawings. Include light fixtures, devices, trim, and schedules and details showing general arrangement, materials, dimensions and construction for the completed work.
- D. Deliver materials to the job site in manufacturer's original packaging with manufacturer and product name clearly indicated.
- F. Store materials in a manner to prevent damage, deterioration or contamination.

2.00 PRODUCTS

- A. Description: Unless otherwise specified, provide modifications to existing electrical system as shown on the drawings or required by Codes. New materials and construction to match existing, unless otherwise indicated.
- B. Miscellaneous materials: Provide all trim, supports, fasteners, clips, tape or other items required to produce the desired finished installation.

3.00 EXECUTION

- A. All new light fixtures to be LED type. Install materials (in areas as indicated on the drawings) according to manufacturer's installation instructions and recommendations.
- B. Verify exact locations of all wall, floor and ceiling mounted devices and equipment with the Architect.
- C. All "in wall" conduit servicing devices to be routed from above and installed vertically. Avoid horizontal conduit routing in wall. Install according to approved submittals. (in areas as indicated on the drawings. Refer to Architectural Reflected Ceiling Plan for location of ceiling mounted light fixtures and air distribution devices. Coordinate as required to avoid conflicts.
- D. All wiring devices and cover plate colors to match existing.
- E. Wall box Occupancy (motion) switches to be Watt-Stopper MO. DSW-301-W series or approved equal with no minimum load.
- F. Wall box Occupancy (motion) switches w/dimming (single and 3-way) Watt-Stopper No. PW-311-W or approved equal with no minimum load.
- G. Provide and install #18 AWG (solid, copper), Two Conductor 0-10V Cable (liberty cable #18-2C-LVBP or equal) from all combination motion/dimmer switches and dimmer only switches to the dimming fixtures as required by light fixture manufacturer for 0-10V dimming operation.
- H. Locate wall box switches, motion sensors, motion sensors with dimming, and dimmer switches within 6" of strike side of door jamb. Verify with Architect.

END OF SECTION