



BID PACKAGE

PART IV

SPECIFICATIONS

DMH Project#2019-106

Subdivide 6 existing rooms into 12 double occupancy rooms

at

**Tewksbury State Hospital
Saunders Bldg.
365 East Street
Tewksbury, MA 01876**

**THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF HUMAN SERVICES
DEPARTMENT OF MENTAL HEALTH**

S P E C I F I C A T I O N S

FOR

**DMH CLIENT BEDROOMS SUBDIVISION
SAUNDERS BUILDING
TEWKSBURY HOSPITAL**

AT

**365 EAST STREET
TEWKSBURY, MASSACHUSETTS 01876**

PROJECT 2019-106

**DEPARTMENT OF MENTAL HEALTH
OFFICE OF ENGINEERING AND FACILITIES MANAGEMENT
167 LYMAN STREET
WESTBOROUGH, MA 01581**

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DATE: APRIL 23, 2019

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SECTION 011000
SUMMARY OF THE WORK

PART 1 – GENERAL

1.1 CONTRACT REFERENCES

- A. Attention is directed to the CONTRACT and GENERAL CONDITIONS and all Sections within Division 1 – GENERAL REQUIREMENTS that are hereby made a part of this Section of the Specifications.

1.2 DEFINITIONS

- A. The following terms shall be applicable to these Specifications:
1. **DPH Project Manager:** Refers to [REDACTED], Massachusetts Department of Public Health, 365 East Street, Tewksbury, MA 01876. (978) 616-2246.
 2. **DMH Facility Manager:** Refers to [REDACTED], Massachusetts Department of Public Health, 365 East Street, Tewksbury, MA 01876. (978) 616-2246.
 3. **DMH Engineer:** Refers to John M. O'Donnell, P.E., LSP Massachusetts Department of Mental Health, 167 Lyman Street, Westborough, MA 01581. (508) 616-2246.
 4. **Contractor:** Refers to the Contractor who has been awarded the overall contract for the work outlined by the Contract Documents.
 5. **Subcontractor:** Refers to any subcontractor who is working under the direct supervision of the Contractor including but not limited to: electrician, carpenter, painter, and trucking/transport companies.
 6. **SITE:** Refers to Saunders Building, Tewksbury Hospital, 365 East Street, Tewksbury, MA 01876.
- B. The terms are provided to facilitate communication but do not supersede the legal definitions provided in the Contract.

1.3 WORK UNDER THIS CONTRACT

- A. The work described under this Contract covers the furnishing of all labor, materials, equipment, services, and permits necessary for the subdivision of the Department of Mental Health (DMH) client bedrooms in the C4 Unit from 6 quad occupancy bedrooms to 12 double occupancy bedrooms. In addition, an “ADD ALTERNATIVE” for an identical scope of work in the C5 Unit. Please note that the proposed construction is with a facility under the care and control of the Department of Public Health (DPH) and that the management of the construction will be by DPH.
- B. The Scope of Work shall include but is not limited to the following:

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1. Application of, paying for, and securing any and all permits required from local, state, and federal agencies, and other authorities having jurisdiction over construction on the Site, including submitting, revising, and resubmitting all required plans, permits, and notifications.
2. Coordination with the DPH Project Manager for the protection of existing equipment, floors, walls, and ceilings and utilities. Includes protection of active utilities encountered within the Work Area and in areas as designated by the DPH Project Manager.
3. Preparation and submission of project work plan and schedules. The Plan shall include all requirements necessary to keep all facilities open at all times for safe public access and use.
4. Mobilization to the Site including but not limited to establishment of the Contractor's space within the Building.
5. Attendance and participation in a Health, Safety and Security training meeting with DPH Project Manager and the DPH Safety Officer.
6. Establish work area perimeter and installation of dust control measures to isolate the work area. The Contractor shall maintenance of all protective measures for the duration of the Work. Protective measures shall include, but not be limited to barriers, signage, and caution tape, as required by the DPH Project Manager and as required by other project permits.
7. Perform required selective demolition, including but not limited to, removal of designated ceramic block and tile and 4-inch concrete masonry units.
8. Separate existing fin tube radiator with controls for each room. Modify existing radiator panels and screen below to accommodate new wall.
9. Installation of new walls, interior door frames, smoke detectors, lighting controls, and ancillary fittings and equipment.
10. Mud, tape, and sand all gypsum wall panels to smooth finish.
11. Prime and paint new walls, door fill at hallway and door frames. Color to match existing.
12. Patch in VCT flooring at new door locations for close match.
13. Install new 4" vinyl baseboard at new wall locations.
14. Relocation of existing lighting fixtures and smoke detectors.

15. Installation of twelve new custom door frames with 4' x 7' doors provided by Owner. Door hardware including continuous hinges and door handles to be provided by Owner and installed by Contractor.
 16. All areas within the work area shall be thoroughly cleaned.
 17. Demobilization from the SITE including removal of all demolition and construction debris for legal disposal in accordance with all applicable local, state, federal laws and regulations.
- C. It is the Contractor's responsibility to determine the most efficient method to legally perform this Work. Unless expressly noted, this Specification does not dictate specific methods to be implemented in the performance of the Work.

1.6 EXAMINATION OF SITE AND DOCUMENTS

- A. Pre-bid inspection will be held on the date and time listed in the *Instructions to Bidders* at the SITE. It is **Mandatory** that the potential Bidders visit the site at this time in order to Bid on this project and determine the actual field conditions including access, evaluation of the work areas; and protection requirements.
- B. Bidders are expected to examine and to be thoroughly familiar with all contract documents and with the conditions under which the work is to be carried out. The Commonwealth will not be responsible for errors, omissions, and/or charges for extra work arising from the Contractors or Subcontractors failure to familiarize themselves with the contract documents, that he is familiar with the conditions and requirements of both where they require, in any part of the work a given result to be produced, that the contract documents are adequate and he will produce the required results.

1.7 CONTRACTOR QUALIFICATIONS

- A. The Contractor does **not** need to be a Division of Capital Asset Management and Maintenance (DCAMM) certified General Contractor with a current certification.
- B. Contractors must be pre-qualified TRD01 *Tradesperson Contract Installation, Repair, and Maintenance Services*. In particular, subcategory TRD01- General Contracting (PO-17-1080-OSD03-SRC02-10362) is applicable. All requirements and conditions of the Statewide Contract are applicable
- C. Within three business days from the bid opening, the apparent low bidder shall submit a certification in writing that it has successfully performed at least three recent (within last three years) projects of similar size, scope, and cost. The apparent low bidder shall submit the following information for each project:
1. Project Description
 2. Project Value
 3. Date was conducted

4. Reference with contact information for the Owner who was the recipient of the work.

1.8 CONTRACT METHOD

- A. Work under this Contract shall be lump sum price, for the scopes of work as described in these Specifications.
- B. Should additional work be required, the procedures specified in the Contract shall apply.
- C. The Massachusetts Standard Labor Wage rates, as included in the Contract exhibits, will be used for base contract work, as well as any change order work.

1.9 SUPERVISION OF THE WORK

- A. The Contractor shall be held directly responsible for the correct installation of all work performed under this Contract. The Contractor must make good repair, without expense to the Commonwealth, of any part of the new work, or existing work to remain, which may become inoperative on account of leaving the work unprotected or unsupervised during construction of the system or which may break or give out in any manner by reason of poor workmanship, defective materials or any lack of space to allow for expansion and contraction of the work during the Contractor's warranty period, from the date of final acceptance of the work by DPH.
- B. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with his direct work.

1.10 CONTRACTOR'S USE OF THE PREMISES

- A. The Contractor can gain access to the premises during the hours specified below. In addition the Contractor and his personnel will limit themselves to only within the Limits of Work during working hours. If work needs to be scheduled during times other than those listed below, Contractor shall inform the DPH Project Manager one week prior to work and request approval
 1. Deliveries: 7:00 am to 8:30 am and after 1:00 pm.
 2. General Access: 7:00 am to 4:00 pm.
- B. The Contractor shall supervise the use of the SITE related to construction and be responsible for correcting any damage identified by DPH to DPH's satisfaction.
- C. An existing conditions survey shall be conducted prior to any work being performed with the DPH Project Manager and the DPH Site Director or their representatives.
- F. Existing utilities within the interior Limits of Work will be available for use during construction unless indicated otherwise. These utilities would include

water, sewer, and electricity. Temporary connections to these utilities, all metering, transformers, removal, usage, and their associated costs will be the responsibility of the Contractor.

- G. All apparatus, storage, and the operation of workmen in connection with activities under this Section shall be confined to the Limits of Work as shown on the Drawings. Storage of project-specific equipment and materials will be permitted on the property upon approval of the DPH Project Manager.
- H. All parking regulations shall be observed.
- I. All vehicles carrying loose, dry material such as demolition debris, refuse, construction debris, etc., shall be covered by tarpaulins to prevent blowing away or spillage of contents. All spillage of whatever nature shall be promptly taken up and removed.

1.11 COORDINATION

- A. The Contractor shall be responsible for the proper fitting of all the work and for the coordination of the operations of all trades, subcontractors or material and men engaged upon the work. The Contractor shall do, or cause his agents to do, all cutting, fitting, adjusting, and repair necessary in order to make the several parts of the work come together properly.
- B. Execute the work in an orderly and careful manner with due regard to the occupants of the facility, the public, the employees, and the normal function of the facility.
- C. The work sequence shall follow planning and schedule established by the Contractor as approved by the DPH Project Manager. The work shall commence promptly and be executed with full simultaneous progress. Work operations which require the interruption of utilities, service, and access shall be scheduled so as to involve minimum disruption and inconvenience, and to be expedited so as to insure minimum duration of any periods of disruption or inconvenience.
- D. The Contractor shall review the tolerances established in the specifications for each type of work and as established by trade organizations. The Contractor shall coordinate the various trades and resolve any conflicts that may exist between trade tolerances without additional cost to DPH. The Contractor shall provide any chipping, leveling, shoring or surveys to ensure that the various materials align.

1.12 REFERENCE STANDARDS

- A. For products specified by association or trade standards, comply with requirements for the standard, except where more rigid requirements are specified or are required by codes. Refer to the specific Specification for specific references.
- B. Where reference is made in the Contractual Documents to Publications and

Standards issued by Associations or Societies, the intent shall be understood to specify the current edition of such Publications or Standards (including tentative revision) in effect on the date of the contract advertisement notwithstanding any reference to a particular date.

1.13 PRECONSTRUCTION CONFERENCE

- A. In accordance with Article V of the CONTRACT AND GENERAL CONDITIONS, a pre-construction conference to review the work will be conducted by the DMH Project Manager.
- B. Representatives of the following shall be required to attend this conference:
 - 1. DPH Project Manager
 - 2. DPH Site Director
 - 3. DMH Engineer
 - 4. Contractor
 - 5. All Subcontractors
- D. The Contractor shall identify in writing questions, irregularities or interference to the DPH Project Manager in writing. Failure to identify and address such issues in advance becomes the sole responsibility of the Contractor.
- E. The Contractor shall have a responsible representative at the pre-construction conference, as well as representatives of field or office forces and major subcontractors. All such representatives shall have authority to act for their respective firms. The pre-construction conference is to be held within five days of Notice to Proceed, or as otherwise determined by DPH.

1.14 WORK BY DPH

- A. DPH will provide Site Access
- B. DPH will designate parking and staging areas.
- C. DPH will provide access to water, electrical, and sanitary facilities. Note that electrical service in the Building is 110 volt2000A, 120/208 Volt Three Phase4-Wire System. If the Contractor requires additional power, the Contractor is responsible to provide the additional power under the base contract fee.

1.15 SUBCONTRACTORS

- A. After selection, the successful Bidder shall submit a list of subcontractors proposed for the performance of the Work to DPH for approval. The list shall include the name, address, contact person, and MA tax identification number for each subcontractor.

1.16 PROJECT MEETINGS

- A. Project meetings shall be held on a weekly basis and as required subject to the

discretion of the DPH Project Manager.

- B. As a prerequisite for monthly payments, ordering schedules, shop drawing schedules, and coordination meeting schedules shall be prepared and maintained by the Contractor and shall be revised and updated on a monthly basis, and a copy shall be submitted to the DPH Project Manager.
- C. In order to expedite construction progress on this project, the Contractor shall order all materials immediately after the approval of shop drawings and shall obtain a fixed date of delivery to the project site for all materials ordered which shall not impede or otherwise interfere with construction progress. The Contractor shall present a list and written proof of all materials and equipment ordered (through purchase orders). Such list shall be presented at the meetings and shall be continuously updated.
- D. Scheduling shall be discussed with all concerned parties, and methods shall be presented by the Contractor which shall reflect construction completion not being deferred or foreshortened. Identify critical long-lead items and other special scheduling requirements. The project schedule is to include time for submission of shop drawing submittals, time for review, and allowance for resubmittal and review.
- E. Project meetings shall be chaired by the DPH Project Manager.
- F. Minutes of the project meetings shall be prepared by the DPH Project Manager and shall be distributed to all present within 72 hours of the Project Meeting.

1.17 PERMITS, INSPECTION AND TESTING REQUIRED BY GOVERNING AUTHORITIES

- A. If the Contract Documents, laws, ordinances, rules, regulations or orders of any public authority having any jurisdiction require any portion of the Work to be inspected, tested, or approved, the Contractor shall give the DPH Project Manager or his/her designated representative, and such Authority timely notice of its readiness so the DPH Project Manager may observe such inspecting, testing, or approval.
- B. Prior to the start of construction, the Contractor shall complete application to the applicable Building Code enforcement authority for a Building Permit. Such Permit shall be displayed in a conspicuous location at the project site.
- C. Unless otherwise specified under the Sections of the Specifications, the Contractor shall pay such proper and legal fees to public officers and others as may be necessary for the due and faithful performance of the work and which may arise incidental to the fulfilling of this Contract. As such, all fees, charges and assessments in connection with the above shall be paid by the Contractor.

1.18 CUTTING, CORING, AND PATCHING, UNLESS OTHERWISE INDICATED

- A. The Contractor shall do all cutting, coring, fitting and patching of his work that

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may be required to make its several parts come together properly and fit it to receive or be received by work of the Subcontractors as indicated in the Specifications.

- B. The Contractor shall not endanger any work by cutting and coring or otherwise altering the work and shall not cut or alter the work of any other Subcontractor except with the written consent of the DPH Project Manager.
- C. Submit a written request to the DPH Project Manager well in advance of executing any cutting or alteration which affects:
 - 1. Work of DMH or separate contractor.
 - 2. Structural value or integrity of any element of the SITE.
 - 3. Integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
 - 4. Efficiency, operational life, maintenance, or safety of operational elements.
 - 5. Visual qualities of sight-exposed elements.
- D. Performance:
 - 1. Execute cutting and patching by methods which will prevent damage to other work, and will provide proper surfaces to receive installation of repairs.
 - a. In general, where mechanical cutting is required, cut work with sawing and grinding tools, not with hammering and chopping tools, core drill openings through concrete work.
 - b. Prior to cutting and structural steel or concrete work, contact the DPH Project Manager in writing. Do not cut any structural steel and concrete work until approval has been granted by the DPH Project Manager.
 - 2. Execute fitting and adjustment of products to provide a finished installation to comply with specified products, functions, tolerances, and finishes.
 - 3. Restore work which has been cut or removed; install new products to provide completed Work in accordance with requirements of Contract Documents.
 - 4. Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
 - 5. Patch with seams which are durable and as invisible as possible. Comply with specified tolerances for the work.
 - 6. Restore exposed finishes of patched areas; and, where necessary extend finish restoration onto retained work adjoining, in a manner which will eliminate evidence of patching.
 - a. Where patch occurs in a smooth painted surface, extend final paint coat over the entire unbroken surface containing the patch.
 - 7. Refinish entire surfaces as necessary to provide an even finish to match adjacent finishes:
 - a. For continuous surfaces, refinish to nearest intersection.
 - b. For an assembly, refinish entire unit.
- E. Existing Utilities Services:

1. Interruptions to critical existing utility services will not be allowed.
2. The Contractor shall locate and record on Drawings all existing utilities along the course of the work by such means as the DPH Project Manager may approve, and shall preserve such marked locations until the work has progressed to the point where the encountered utility is fully exposed and protected as required. It shall be the Contractor's responsibility to notify the proper authorities and/or utility company before interfering therewith.
3. All exposed conduits, wires, and/or cables shall be provided with sufficient protection and support to prevent failure, fraying, or damage due to backfilling or other construction operations.
4. The Contractor shall not obstruct access to existing active utility system manholes and catch basins which continue to serve facilities other than the project construction site. The Contractor shall exercise measures as necessary to prevent the placement of impediments that limit continuous access by authorized utility company or DPH maintenance personnel and shall be required to reimburse the utility company or DPH for any expense incurred as a result of need to remove any such impediments to access.

1.19 SECURITY REQUIREMENTS

- A. The Contractor shall familiarize himself with DPH's security requirements and shall abide by and conform with established regulations at all times. The Contractor shall submit a list of personnel who will be on-site to the DPH Project Manager. List shall be kept current by Contractor.
- B. Criminal Offender Record Information Check. All on-site employees and/or prospective employees of Contractor and Subcontractors working on this project are subject to a CORI (Criminal Offender Record Information) check pursuant to Chapter 6 of the Massachusetts General Laws. All on-site personnel must meet this requirement before being allowed on site
- C. Proper identification must be worn at all times.

1.20 SAFETY REQUIREMENTS

- A. OSHA Safety and Health Course Documentation Records: Chapter 306 of the Massachusetts Acts of 2004 requires that everyone employed at the jobsite must complete a minimum 10-hour long course in construction safety and health approved by the U.S. Occupational Safety and Health Administration (OSHA) prior to working at the jobsite. Compliance is required for the Contractor's and subcontractors' on-site employees at all levels. This requirement does not apply to home-office employees visiting the Site or to suppliers' employees who are making deliveries.
- B. Prior to the start of project, submit documentation of current OSHA 10 Hour safety training cards for all proposed on-site personnel to the DPH Project Manager. Documentation records shall be initially complied by the Contractor

and subcontractors as part of certified payrolls, and the Contractor shall create and maintain a copy of the documentation on-site at all times.

- C. The SITE will be occupied during execution of work. Work shall be conducted in a manner to afford maximum protection of building, facilities, employees and the public and to prevent unreasonable delay or interference with normal functioning of the building.
- D. Provide fire extinguishers so that they shall be readily available at all times.
- E. All accident reports are to be transmitted to the DPH Project Manager within 24 hours of occurrences.

1.22 SPECIAL REQUIREMENT

- A. The Contractor shall meet with the Hospital's Director of Environmental Health & Safety and Infection Control Coordinator to develop a Pre-Construction Infection Control Risk Assessment ("ICRA") prior to the commencement of any construction. The ICRA will include, but not be limited to such topics as: Air Quality, Infection Control, Noise & Vibration, Debris Removal, Utilities, Emergency Procedures, and Interim Life Safety Measures. Once approved, the Contractor will be required to comply with the terms of the ICRA throughout the project. The Hospital shall have the authority to enforce the terms of the ICRA.
- B. All of the Contractor's employees who will be working inside the Saunders Building will be required to attend an orientation, which will be provided by the Taunton State Hospital's Safety Officer, prior to working in the Saunders Building. The orientation will include, but not be limited to such topics as: Patient Confidentiality (HIPAA), Security, Safety, Smoking, Fire Safety, Debris Removal, Infection Control, and Hazard Communication.
- C. The Contractor shall take precautions to prevent the spread of dust and debris, particularly where such materials may drift into the rest of the Building. The Contractor shall provide labor and materials to construct, maintain, and remove necessary temporary enclosures to prevent dust or debris in the construction area from entering the remainder of the Building.
- D. Work shall be conducted in a manner to afford maximum protection of building, facilities, employees and the public and to prevent unreasonable delay or interference with normal functioning of the building.

****** END OF SECTION ******

**SECTION 012300
ALTERNATES**

PART 1 GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 REQUIREMENTS INCLUDED

- A. Definition: "Alternates" are alternate products, materials, equipment, systems, methods, units of work or major elements of the construction, which may, at the Awarding Authority's option and under the terms established by the Contract or Agreement, be selected for the work in lieu of the corresponding requirements of the Contract Documents.
- B. Alternate Requirements: A Schedule of Alternates is included at the end of this Section. Each alternate is defined using abbreviated language, recognizing that the Contract Documents define the requirements. Coordinate related work to ensure that work affected by each alternate is complete and properly interfaced with work of each selected alternate.
- C. Provide written proposals for each alternate on the Form of Proposal for the Awarding Authority's consideration. Each proposal amount shall include the entire cost of the alternate portion of the work including overhead, profit, taxes, insurance, and other costs including cost of interfacing and coordinating the alternate with related and adjacent work.
- D. Selection of Alternates: Selection of alternates to be included in the work will be by the Awarding Authority. Alternates must be taken in order. The first alternate must be awarded before the second alternate, etc.
- E. Notification: Prepare and distribute to each entity a notification of status of each alternate. Indicate which alternates have been accepted or rejected, or when such decision is anticipated.

1.3 DESCRIPTION OF ADD ALTERNATES NUMBER ONE

- A. ADD ALTERNATIVE Number One consists of performing the identical scope of work being performed under the Base Contract but performing the work in the C5 Unit. The location of the C5 unit is shown on Drawing 10. The typical details shown on Drawings 3 through 9 are applicable. All Specifications sections are also applicable

2.0 PRODUCTS (Not Used)

3.0 EXECUTION (Not Used)

****** END OF SECTION ******

**SECTION 013300
SUBMITTALS**

PART 1 – GENERAL

1.1 PROVISIONS INCLUDED

- A. Attention is directed to the CONTRACT and GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS which are hereby made a part of this Section of the specification.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- A. The Contractor shall review and submit to the DPH Project Manager, shop drawings and product data required by Specification Section.
- B. Shop Drawings:
 - 1. Original drawings shall be prepared by Contractor, Subcontractor, supplier or distributors, which illustrate some portion of the work; show fabrication, layout, setting or erection details.
 - a. Shop drawings shall be prepared by a qualified detailer.
 - b. Details shall be identified by reference to sheet and detail number shown.
 - c. Maximum sheet size shall be 30 inch by 42 inch.
 - d. Reproductions for submittals shall be reproducible with the required number of opaque prints specified herein.
- B. Schedule: Provide a schedule of hollow metal work prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with door hardware schedule.
- D. Project Data:
 - 1. Manufacturer's standard schematic drawings:
 - a. Modify drawings to delete information which is not applicable to project.
 - b. Supplement standard information to provide additional information applicable to project.
 - 2. Manufacturer's catalog sheets, brochures, diagrams, schedules, performance charts, illustrations and other standard descriptive data:
 - a. Clearly mark each copy to identify pertinent materials, products or models.
 - b. Show dimensions and clearances required.
 - c. Show performance characteristics and capacities.

3. Product Test Reports: Based on evaluation of comprehensive fire tests performed by a qualified testing agency, for each type of standard wood door and frame.

1.3 CONTRACTORS RESPONSIBILITIES

- A. The Contractor shall coordinate each submittal with requirements of work and contract documents.
- B. The Contractor's responsibility for errors and omissions in submittals is not relieved by DPH Project Manager's review of submittals.
- C. Notify DPH Project Manager in writing at time of submission, of deviations in submittals from requirements of contract documents or previous submissions.
- D. Work that requires submittals shall not commence unless submittals have DPH Project Manager's stamp and initials or signature indicating review and approval.
- E. After DPH Project Manager's review, the Contractor shall distribute required copies.

1.4 SUBMISSION REQUIREMENTS:

- A. Make submittals promptly and in such sequence as to cause no delay in the work.
- B. Submit four (4) opaque copies of shop drawings, and same number of copies of product data which the Contractor requires for distribution, plus two (2) copies which will be retained by the DPH Project Manager.
- C. Submit number of samples specified in each Specification Section.
- D. Forward submittals with transmittal letter.
- E. Submittals shall include:
 1. Date and revision date.
 2. Project title.
 3. The names of:
 - a. Contractor
 - b. Subcontractor
 - c. Supplier
 - d. Manufacturer
 4. Identification of product or material.
 5. Relation to adjacent structure of materials.
 6. Field dimensions, clearly defined as such.
 7. Specification Section number.
 8. Applicable standards, such as ASTM number.
 9. A blank space 5 inches by 4 inch, for the DPH Project Manager's stamp.
 10. Identification of deviations from contract document.

11. Contractors stamp, initialized or signed, certifying review and approval of submittals.

1.5 RESUBMISSION REQUIREMENTS

- A. Shop Drawings:
 1. Drawings shall be designated approved, approved as noted, revise and resubmit or rejected.
 2. Revise drawings as required and resubmit as specified for previous submittal.
 3. Product Data: Submit new data as required from previous submittals.

1.6 DISTRIBUTION OF SUBMITTALS AFTER REVIEW

- A. Distribute copies of shop drawings and project data which display the DPH Project Manager's written approval to appropriate Subcontractors.

1.7 SCHEDULE OF VALUES

- A. Prior to the first request for payment, the Contractor shall submit to the DPH Project Manager, a draft Schedule of Values of the various portions of the work in sufficient detail to reflect various major components of each trade, including quantities when requested, aggregating the total contract sum, and divided so as to facilitate payments for work under each Section.
- B. The draft Schedule of Values shall be prepared in such form as specified or as DPH may approve and it shall include data to substantiate its accuracy.
- C. Each item in the Schedule of Values shall include its proper share of overhead and profit. This Schedule including breakdown and values requires the approval of DPH and shall be used only as a basis for the Contractor's request for payment.

****** END OF SECTION ******

SECTION 015000
TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT and GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION

- A. The Contractor shall be responsible for providing and maintaining temporary construction facilities and controls as specified herein.

1.3 HOISTING EQUIPMENT AND MACHINERY

- A. All hoisting equipment and machinery required for the proper and expeditious prosecution and progress of the work shall be furnished, installed, operated and maintained in safe condition by the Contractor for the use of all Subcontractor's material and/or equipment delivered to the designated hoisting area except that which is specifically required to be provided by the Subcontractors themselves and is so stated in each appropriately related Section of the Specifications. All costs for hoisting operating services shall be borne by the Contractor.

1.4 STAGING AND TEMPORARY LADDERS, RAMPS, RUNWAYS, ETC.

- A. All staging, exterior and interior, required to be over eight feet in height, shall be furnished and erected by the Contractor and maintained in safe condition by him without change to, and for the use of all trades as needed by them for proper execution of their work.

1.5 DUST CONTROL

- A. The Contractor shall provide adequate means for the purpose of preventing dust caused by construction operations throughout the period of the construction contract.
- B. This provision does not supersede any specific requirements for methods of construction or applicable general conditions set forth in the contract articles with added regard to performance obligations of the Contractor.
- C. The Contractor shall provide and maintain floor mats at access points to prevent the tracking of dust.

1.6 NOISE CONTROL

- A. Develop and maintain a noise-abatement program and enforce strict discipline over all personnel to keep noise to a minimum.
- B. Execute construction work by methods and by use of equipment which will reduce excess noise.
 - 1. Equip air compressors with silencers and power equipment with mufflers.

1.7 CLEANING DURING CONSTRUCTION

- A. The Contractor shall perform clean-up operations during construction as herein specified.
- B. The Contractor shall at all times during the progress of the work, keep the work area and other adjacent areas from accumulation of waste materials or rubbish.
- C. Cleaning and removal of waste material and/or rubbish must be performed on a daily basis.
- D. Control accumulation of waste materials and rubbish, periodically dispose of off-site. The Contractor shall bear all costs, including fees resulting from such disposal.
- E. Store volatile wastes in covered metal containers, and remove from premises.
- F. Prevent accumulation of wastes which create hazardous conditions.
- G. Provide adequate ventilation during use of volatile or noxious substances.
- H. Conduct cleaning and disposal operation to comply with local ordinances and anti-pollution laws.
 - 1. Do not burn rubbish and waste materials on site.
 - 2. Do not dispose of volatile wastes such as mineral spirits, oil, or paint thinner in storm or sanitary drains.
- I. Use only those materials which will not create hazards to health or property and which will not damage surfaces.
- J. Use only those cleaning materials and methods recommended by manufacturer of surface materials to be cleaned.
- K. Provide on-site containers for collection of waste materials, debris and rubbish.
- L. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas off the construction site.

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****** END OF SECTION ******

SECTION 016000
PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT and GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 PRODUCTS

- A. Products include material, equipment and systems. Products shall be new, best of their respective kinds and free from defects.
- B. Comply with Specifications and referenced standards as a minimum requirement.
- C. Components required to be supplied in quantity within a Specification Section shall be the same, and shall be interchangeable.
- D. Do not use materials and equipment removed from existing structures, except as specifically required, or allowed, by the contract documents.
- E. Materials and equipment of similar application: same manufacturer, except as noted.
- F. Secure approval of materials, equipment and installation

1.3 WORKMANSHIP

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration and racking.

1.4 MANUFACTURER'S INSTRUCTIONS

- A. When work is specified to comply with manufacturer's instructions, submit copies as specified in Section 013300 - SUBMITTALS.
- B. Perform work in accordance with details of instructions and specified requirements.

1.5 TRANSPORTATION AND HANDLING

- A. Refer to CONTRACT and GENERAL CONDITIONS and Specification Sections for requirements pertaining to transportation and handling of materials and equipment.
- B. Transport products by methods to avoid product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.
- C. Provide equipment and personnel to handle products by methods to prevent soiling or damage.
- D. Promptly inspect shipments to assure that products comply with requirements, that quantities are correct and products are undamaged.

1.6 STORAGE AND PROTECTION

- A. Refer to CONTRACT and GENERAL CONDITIONS and Specification Sections for requirements pertaining to storage and protection of materials and equipment.
- B. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.
- C. For exterior storage of fabricated products, place on sloped supports above ground. Cover products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure that products are undamaged, and are maintained under required conditions.

****** END OF SECTION ******

**SECTION 017000
CLOSEOUT PROCEDURES**

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT and GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 FINAL CLEANING

- A. Upon completion of the work under this Contract, the Contractor shall leave the SITE ready for use without the need for further cleaning or directly related painting of any kind and with all work in perfect order. The Contractor shall perform final cleaning operations as herein specified prior to final inspection.
- B. At completion of work, remove waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all sight-exposed surfaces; leave project clean and ready for occupancy.
- C. Cleaning shall include all surfaces, interior and exterior in which the Contractor has had access whether existing or new.
- D. Use only those materials which will not create hazards to health or property and which will not damage surfaces.
- E. Use only those cleaning materials and methods that are recommended by the manufacturer of surface material to be cleaned.
- F. Employ experienced workmen or professional cleaners for final cleaning operations.
- G. Remove grease, mastic, adhesives, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior surfaces.
- H. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.
- I. In addition, the Contractor shall remove from the SITE , all building rubbish, unused materials belonging to him or used under his direction during construction or impairing the use or appearance of the property and shall restore such areas affected by the work to their original condition, unless other provisions for completion have been specified.
- J. Prior to final completion or DPH Use and Occupancy, the Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify that the entire work is clean.

1.3 PROJECT DOCUMENTS

- A. As-Built Drawings: Showing all field changes from original Working Plans. Submit full-size hard copy and electronic AutoCAD files on compact disk. Coordinate AutoCAD version with DPH at time of submittal.

1.4 GUARANTEES AND WARRANTIES

- A. The Contractor shall submit to the DPH Project Manager all extended guarantees and warranties that have been specified in various, individual Sections of the Specifications.
- B. The Contractor shall guarantee to DPH all work installed to be free from any and all defects in workmanship and/or materials and that if, during a period of one year from date of certificate of completion and acceptance of work, unless a longer period is specified, any such defects in workmanship, material or performance appear, he will remedy them without cost to DPH.
- C. Should Contractor fail to remedy such defects within the agreed length of time, to be specified in notice from DPH, then DPH may have such work performed by another contractor and charge the entire cost to the Contractor.

****** END OF SECTION ******

**SECTION 024119
SELECTIVE DEMOLITION**

PART 1 – GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT and GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.
- B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of the CONTRACT and GENERAL CONDITIONS.

1.2 DESCRIPTION

- A. The work includes the removal of the existing door frames and removal of designated ceramic block wall for new door frames and light switches. In addition, the existing lighting fixtures shall be removed and stored for reinstallation in the center of the new spaces.
- B. It is not the intent herein to describe all the items and work required to be removed under this Section. The Contractor shall assure himself that all of the work to be removed, not otherwise specified herein or described under other Sections shall be removed under this Section at no additional cost to the Commonwealth.
- C. The Contractor shall also examine other Sections of these Specifications and familiarize himself with their provisions regarding the removal of existing items and work. He shall understand that all items and work not specifically mentioned to be removed by the requirements of other Sections of these Specifications shall be removed as part of the work under this Section.
- D. The scope of work consists of material and services to be furnished under this Section, and without limiting the generality thereof, includes labor, equipment and services required for the removal of existing work, special protection and all work incidental thereto as specified herein and as shown on the Drawings.

1.3 RELATED WORK

- A. The following work is not included in this Section and is to be performed under the contracted scope of work:
 - 1. Cutting and core drilling for any possible new electrical work will be performed by these respective trades.

2. The patching and repair of ceilings, floors and walls caused by work performed under this scope of work is to be included under these Specifications describing similar construction. The Contractor shall do his utmost to keep such necessary patching and repairing to a minimum.
3. Disconnecting of existing services, as required, will be done by s licensed subcontractor.

1.4 SCHEDULING

- A. Before beginning demolition activities, the Contractor shall consult jointly with the DPH Site Director and DPH Project Manager to determine the schedule of work, exact places, times and days during which the demolition work may, or may not be carried on, and to determine further reasonable requirements, particularly in regards to noise prevention, dust prevention, weather protection, and safety precautions.
- B. No work shall be started without prior approval of the Facility. The Contractor shall give the DPH Project Manager adequate advance notice of his readiness to start such work in order that they may properly rearrange activities or evacuate the spaces to be affected.

1.5 ENCLOSURES

- A. Provide temporary partitions as required to separate work areas from DPH's occupied areas, to prevent penetration of dust and moisture into occupied areas, to prevent damage to existing areas and equipment. Construction shall be framing and sheet materials with closed joints and sealed edges at intersections with existing surfaces.
- B. Provide plastic sheet material and tape to seal HVAC supplies and exhaust. Insure that dust does not enter the ductwork.
- C. Provide plastic sheet material and tape to seal smoke alarm. Insure that dust does not enter the smoke alarm. Coordinate with DPH Project Manager before sealing smoke detectors.

1.6 PROTECTION

- A. When removing materials and making openings in walls, floors, etc., the Contractor shall take all precautions and use whatever protective devices, shoring, guardrails, and the like as may be required to assure that the remaining and adjacent portions of the existing work which is to remain is substantially supported and/or not loaded beyond safe limits.

PART 2 – PRODUCTS

2.1 PROTECTION EQUIPMENT & SUPPLIES

- A. Plastic Sheeting (“Poly”) and Bags (where applicable) - shall be polyethylene or equivalent with a thickness of at least 6 mil for all applications.
- B. Enclosure Studs – shall be new materials and structurally sound to prevent collapse.
- C. Painter’s tape – shall be sufficiently wide to ensure that damage does not occur from attachment of other tapes.
- D. Waste Containers and Transportation - shall be suitable for loading, transport, and unloading of collected debris without risk of ripping, rupture, or exposure to persons, or emissions to the atmosphere. Transportation methods shall comply with the provisions of any and all state and local hazardous or special waste regulations for transport, and disposal if such codes are enforced in states in which the waste will be stored, transported, or disposed.

PART 3 – EXECUTION

3.1 PREPARATION

- A. Before starting the removal of work, the Contractor shall arrange for the disconnection of active utility services in the areas where construction work is to take place. All work on existing utilities shall be accomplished by the respective subcontractor or utility companies having jurisdiction.
- B. Provide dust protection to contain dust and debris to the work area.

3.2 REMOVAL OF EXISTING WORK

- A. Removal of the designated ceramic block and tiles.
- B. Removal and disposal of existing hard ceilings which interfere with the installation of the new lighting system.

3.3 CLEAN-UP

- A. At the completion of work, all rubbish, debris, waste, materials, and salvaged materials shall be removed from the SITE. All tools, scaffolds, apparatus and appliances used in connection with work under this Section shall be removed by the Contractor, and the premises shall be left in clean condition, ready for the alteration work as described under other Sections of these Specifications.

3.4 DISPOSAL OF WORK REMOVED

- A. All refuse and debris which accumulates as a result of work under this Section shall be removed. No refuse or debris of any nature shall be allowed to accumulate to the detriment of the work.
- B. Remove debris in covered containers on a route designated by the DPH Project Manager.

****** END OF SECTION ******

SECTION 081113

HOLLOW METAL FRAMES

PART 1- GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.
- B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of the CONTRACT and GENERAL CONDITIONS.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to install standard six hollow double-rabbit metal door frames as indicated on the drawings and in accordance with the these specifications. Installation shall include preparation of the framing entrance, installing and securing the frame, and sealing any gaps between the frame and the adjacent existing materials.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - i. Section 0241119 – Selective Demolition for saw-cutting and removing existing tile and CMU.
 - ii. Section 087100 - DOOR AND DOOR HARDWARE for door hardware for wood doors.

1.3 QUALITY ASSURANCE

- A. Fire-Rated Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings and temperature-rise limits indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
- B. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
- C. Fire-Rated, Borrowed-Light Assemblies: Complying with NFPA 80 and listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.

1.4 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication.

1.5 COORDINATION

- A. Coordinate installation of anchorages for hollow metal frames. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors. Deliver such items to Project site in time for installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Amweld International.
 - 2. Ceco Door Products; an ASSA ABLOY Group Company.
 - 3. CURRIES Company; an ASSA ABLOY Group Company.
 - 4. Mesker Door Inc.
 - 5. Pioneer Industries, Inc.
 - 6. Republic Builders Products Company.
 - 7. Steelcraft, an Ingersoll Rand Company.

2.2 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.
- B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B; with minimum G60 metallic coating.
- D. Frame Anchors: ASTM A 591/A 591M, Commercial Steel (CS), 40Z coating designation; mill phosphatized.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Powder-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow metal frames of type indicated.

- G. Grout: ASTM C 476, except with a maximum slump of 4 inches, as measured according to ASTM C 143/C 143M.
- H. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool with 6- to 12-lb/cu. ft. density; with maximum flame-spread and smoke-development indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.
- I. General: Comply with ANSI A250.8 and with details indicated for type and profile.
- J. Interior Frames: Fabricated from cold-rolled steel sheet, unless otherwise indicated to comply with exterior frame requirements.
 - 1. Fabricate frames with mitered or coped and welded face corners and seamless face joints.
 - 2. Frames for Level 2 Steel Doors: 0.053-inch-thick steel sheet.
- K. Hardware Reinforcement: Fabricate according to ANSI/SDI A250.6 with reinforcement plates from same material as frames.

2.3 FRAME ANCHORS

- A. Jamb Anchors:
 - 1. Masonry Type: Adjustable strap-and-stirrup or T-shaped anchors to suit frame size, not less than 0.042 inch thick, with corrugated or perforated straps not less than 2 inches wide by 10 inches long; or wire anchors not less than 0.177 inch thick.
 - 2. Postinstalled Expansion Type for In-Place Concrete or Masonry: Minimum 3/8-inch- diameter bolts with expansion shields or inserts. Provide pipe spacer from frame to wall, with throat reinforcement plate, welded to frame at each anchor location.
- B. Floor Anchors: Formed from same material as frames, not less than 0.042 inch (1.0 mm) thick, and as follows:
 - 1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

2.4 STOPS AND MOLDINGS

- A. Fixed Frame Moldings: Formed integral with hollow metal frames, a minimum of 5/8 inch high unless otherwise indicated.

2.5 ACCESSORIES

- A. Ceiling Struts: Minimum 1/4-inch-thick by 1-inch-wide steel.

- B. Grout Guards: Formed from same material as frames, not less than 0.016 inch thick.

2.6 FABRICATION

- A. Fabricate hollow metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for thickness of metal. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.
- B. Tolerances: Fabricate hollow metal work to tolerances indicated in SDI 117.
- C. Hollow Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
- D. Welded Frames: Weld flush face joints continuously; grind, fill, dress, and make smooth, flush, and not visible.
- E. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
- F. Grout Guards: Weld guards to frame at back of hardware mortises in frames to be grouted.
- G. Floor Anchors: Weld anchors to bottom of jambs and mullions with at least four spot welds per anchor.
- H. Jamb Anchors: Provide number and spacing of anchors as follows:
 - 1. Masonry Type: Locate anchors not more than 18 inches from top and bottom of frame. Space anchors not more than 32 inches o.c. and as follows:
 - a. Three anchors per jamb from 60 to 90 inches high.
 - 2. Postinstalled Expansion Type: Locate anchors not more than 6 inches from top and bottom of frame. Space anchors not more than 26 inches o.c.
- I. Door Silencers: Except on weather-stripped doors, drill stops to receive door silencers as follows. Keep holes clear during construction. Drill stop in strike jamb to receive three door silencers.
- J. Fabricate concealed stiffeners, edge channels, and hardware reinforcement from either cold- or hot-rolled steel sheet.
- K. Hardware Preparation: Factory prepare hollow metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to the Door Hardware Schedule and templates furnished as specified in Section 087100 - DOOR HARDWARE.

- L Locate hardware as indicated, or if not indicated, according to ANSI/SDI A250.8.
- M Reinforce doors and frames to receive nontemplated, mortised and surface-mounted door hardware.
 - 1. Comply with applicable requirements in ANSI/SDI A250.6 and ANSI/DHI A115 Series specifications for preparation of hollow metal work for hardware.
- N Stops and Moldings: Provide stops and moldings where indicated. Form corners of stops and moldings with butted or mitered hairline joints.
 - 1. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
 - 2. Provide loose stops and moldings on inside of hollow metal work.
 - 3. Coordinate rabbet width between fixed and removable stops with type of glazing and type of installation indicated.

2.6 STEEL FINISHES

- A. Prime Finish: Apply manufacturer's standard primer immediately after cleaning and pretreating.
- B. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with ANSI/SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.
- B. Prior to installation, adjust and securely brace welded hollow metal frames for squareness, alignment, twist, and plumbness to the following tolerances:

1. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 2. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 3. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 4. Plumbness: Plus or minus 1/16 inch, measured at jambs on a perpendicular line from head to floor.
- C. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

- A. General: Install hollow metal work plumb, rigid, properly aligned, and securely fastened in place; comply with Drawings and manufacturer's written instructions.
- B. Hollow Metal Frames: Install hollow metal frames of size and profile indicated. Comply with ANSI/SDI A250.11.
1. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. At fire-protection-rated openings, install frames according to NFPA 80.
 - b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
 - c. Install frames with removable glazing stops located on secure side of opening.
 - d. Install door silencers in frames before grouting.
 - e. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - f. Check plumbness, squareness, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 - g. Field apply bituminous coating to backs of frames that are filled with grout.
 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with postinstalled expansion anchors.
 - a. Floor anchors may be set with powder-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
 3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.

4. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
5. Provide adjustable wedged or bolted anchorage to frame jamb members.
6. Installation Tolerances: Adjust hollow metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch, measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch, measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch, measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch, measured at jambs at floor.

3.4 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Metallic-Coated Surfaces: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

****** END OF SECTION ******

**SECTION 081416
DOORS & HARDWARE**

PART 1 - GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the installation of continuous hinges, solid-core door-within-doors, and door handles. Hinges, doors, and hardware to be provided by Owner.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Section 081113 – HOLLOW METAL FRAMES for installation of door frames into concrete floors and masonry walls.

PART 2 - PRODUCTS

2.1 DOOR

- A. Manufacturer and Model Number: Acrovyn. Model BR SCL5-20PP

2.2 CONTINUOUS HINGES

- A. Manufacturer and Model Number: Marker Architectural products Model #: FM300-HT with TEPIT ligature resistant hospital tip.

2.3 DOOR HARDWARE

- A. Manufacturer and Model Number: Corbin Russwin Model #BHSS Trim (mortise)

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine doors and installed doorframes before hanging doors.

1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Adjust door frames to plumb condition to plumb condition before door installation. Tolerances for warp, squareness and pre-fitting dimensions shall be as per last edition of WDMA 1.S. 1A-04.
- D. Do not install doors in frame openings that are not plumb or out of tolerance for size or alignment.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 DOOR INSTALLATION

- A. Handle doors in accordance with recommendations of WDMA 1.s. 1A-04 "care and Installation at Job Site."
- B. Install doors in accordance with manufacturer's written instructions, referenced quality standard and as indicated..
- C. Manufacturer's Written Instructions: Install doors to comply with manufacturer's written instructions, referenced quality standard, and as indicated.
1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.
- D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

3.3 CONTINUOUS HINGE INSTALLATION

- A. Install hinges in accordance with the manufacturer's instructions. Fasteners to be supplied by manufacturer. Hole pattern shall be symmetrically patterned.

3.4 DOOR HARDWARE INSTALLATION

- A. Install hardware in accordance with the manufacturer's instructions.

3.5 DOOR ADJUSTING

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

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- B. Protection: Provide temporary protection to ensure work being without damage or deterioration at time of final acceptance. Remove protections and reclean as necessary immediately before final acceptance.
- C. Finished Doors: Replace doors that are damaged or do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

****** END OF SECTION ******

SECTION 092116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 GENERAL PROVISIONS

- A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.
- B. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of the CONTRACT and GENERAL CONDITIONS.

1.2 DESCRIPTION OF WORK

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Interior gypsum wallboard.
 - 2. Acoustic insulation in gypsum wallboard assemblies.
 - 3. Non-load-bearing steel framing.
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Section 0241119 – Selective Demolition for saw-cutting and removing existing tile and CMU.

1.4 SUBMITTALS

- A. Shop Drawings: If materials and systems other than those specified and those indicated on the Drawings are proposed for use, submit shop drawings signed and sealed by a structural engineer licensed in the Commonwealth of Massachusetts certifying proposed systems meet code requirements, project requirements and the following deflection criteria:
 - 2. For gypsum board assemblies without applied rigid finishes L/240. Lateral load 5 psf.
- B. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, following requirements apply for product selection:
 - 1. Product: Subject to compliance with requirements, provide product specified.

2.2 NON-LOAD-BEARING STEEL FRAMING, GENERAL

- A. Steel Framing Members: Comply with ASTM C 754 for conditions indicated.
- B. Steel Sheet Components: Metal complying with ASTM C 645 requirements.
- C. Protective Coating: manufacturer's standard corrosion-resistant zinc coating.

2.2 PARTITION FRAMING

- A. Steel Studs and Floor Runners: ASTM C 645, in depth indicated.
 - 1. Minimum Base Metal Thickness: 0.0179 inch (25 gage) thickness for framing spaced 24 inches, unless otherwise indicated or recommended by manufacturer.
- B. Fire Stop Tracks: Top runner manufactured to allow partition heads to expand and contract with movement of the structure while maintaining continuity of fire-resistance-rated assembly indicated; in thickness compatible with studs and in width to accommodate depth of studs.
 - 1. Grace Construction Products; FlameSafe FlowTrak System.
 - 2. Fire Trak Corp.; Fire Trak attached to studs with Fire Trak Slip Clip.
 - 3. Metal-Lite, Inc.; The System.
- C. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
 - 1. Minimum Base Metal Thickness: 0.027 inch (22 gage), unless otherwise indicated.
- D. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power and other properties required to fasten steel members to substrates.
- E. Direct Furring Strips:: 1/2-inch- deep, steel sheet members designed to reduce sound transmission
- F. Resilient Furring Channels: 1/2-inch- deep, steel sheet members designed to reduce sound transmission.

1. Configuration: Asymmetrical or hat shaped, with face attached to single flange by slotted leg (web) or attached to two flanges by slotted or expanded metal legs.
- F. Isolation Strip at Exterior Walls: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

2.4 GYPSUM BOARD

- A. General: Complying with ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent. Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.
- B. Gypsum Wallboard: Fire resistant Type X ASTM C 36. In thickness indicated and with long edges tapered
- C. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- a. USG Corporation.
 - b. Georgia Pacific Gypsum.
 - c. Lafarge North America.
 - d. National Gypsum Company.

2.5 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
1. Interior Gypsum Wallboard: Paper.
 2. Glass-Mat Gypsum Sheathing Board: 10-by-10 glass mesh.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type taping compound.
 3. Fill Coat: For second coat, use setting-type, sandable topping compound.
 4. Finish Coat: For third coat, use setting-type, sandable topping compound.
 5. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound.

2.6 AUXILIARY MATERIALS

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 - 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
- C. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.
- D. Acoustical Sealant: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - A. Use sealants that have a VOC content of 250 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
 - B. Acoustical Sealant for Exposed and Concealed Joints:
 - a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
 - b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
 - C. Acoustical Sealant for Concealed Joints:
 - a. Ohio Sealants, Inc.; Pro-Series SC-170 Rubber Base Sound Sealant.
 - b. Pecora Corp.; BA-98.
 - c. Tremco, Inc.; Tremco Acoustical Sealant.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

3.3 STEEL FRAMING INSTALLATION

- A. Installation Standard: ASTM C 754. Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Where studs are installed directly dissimilar metals at exterior, install isolation strip between studs and wall.
- C. Install studs so flanges within framing system point in same direction.
- D. Extend partition framing full height to structural supports.
- E. Install tracks (runners) at floors and overhead supports
- F. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
- G. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
- H. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.
- I. Direct Furring: Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

3.5 PLYWOOD INSTALLATION

- A.

3.6 PANEL PRODUCT INSTALLATION

- A. Gypsum Board: Comply with ASTM C 840 and GA-216.
 - 1. Space screws maximum of 12 inches o.c. for vertical applications.
 - 2. Space fasteners in panels that are tile substrates maximum of 8 inches o.c.
 - 3. Apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - 4. Stagger abutting end joints not less than one framing member in alternate courses of board.
 - 5. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.5 FINISHING

- A. Finishing Gypsum Board Panels: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration.
 - 1. Prefill open joints and damaged surface areas.
 - 2. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
- B. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
 - 1. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at panel surfaces that will be exposed to view.

****** END OF SECTION ******

SECTION 210000
MISCELLANEOUS

PART 1 **GENERAL**

1.1 **GENERAL PROVISIONS**

- H. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 01 - GENERAL REQUIREMENTS which are hereby made a part of this Section of the Specifications.
- M. Equality of material, article, assembly or system other than those named or described in this Section shall be determined in accordance with the provisions of the CONTRACT and GENERAL CONDITIONS.

1.2 **DESCRIPTION OF WORK**

- A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Install smoke detectors
 - 2. Install Thermostats.
 - 3. Install Night Lights.
 - 4. Install Light switches
 - 5. Access Panels
- B. Related Work: The following items are not included in this Section and will be performed under the designated Sections:
 - 1. Section 0241119 – Selective Demolition for saw-cutting and removing existing tile and CMU.

PART 2 **PRODUCTS**

2.1 **SMOKE DETECTORS**

- A. Manufacturer and Model Number: Acrovyn. Model BR SCL5-20PP

2.2 **THERMOSTATS.**

- A. Manufacturer and Model Number: Acrovyn. Model BR SCL5-20PP

2.3 **NIGHT LIGHTS**

- A. Manufacturer and Model Number: Acrovyn. Model BR SCL5-20PP

2.4 LIGHT SWITCHES

- A. Manufacturer and Model Number: Acrovyn. Model BR SCL5-20PP

2.5 ACCESS PANELS

- A. Manufacturer and Model Number: Acrovyn. Model BR SCL5-20PP

PART 3 EXECUTION

- A. Install all products in accordance with the manufacturer's recommendations and requirements.

****** END OF SECTION ******