



Architectural Design Incorporated

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MEMORANDUM

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TO: John Blaisdell, Director of Facilities, Barnstable  
Project Team for Barnstable Health Facility

FROM: Andrew Miao, Architectural Design Inc.

DATE: May 27, 2011

RE: Barnstable Health Facility AD 0902.00  
**ADDENDUM & ERRATA TO DRAWINGS AND SPECIFICATIONS**

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I. DRAWINGS

A. Architectural Drawings

1. Drawing A.19 · DOOR SCHEDULE
  - a. Door 112 · Add 2 HOUR RATED
  - b. Door 115 · Change hardware Set to 9  
Add 2 HOUR RATED
  - c. Door 118 · Change Hardware set to 5
  - d. Door 125 · Change Hardware set to 5
  - e. Door 126 · Change Hardware set to 5

B. HVAC Drawings

1. Drawing M.1 · SECOND FLOOR PLAN
  - a. Outside open office (approx B x 6) · Change 3400 CFM Register to R-3

II. SPECIFICATIONS

A. DIVISION ONE SPECIFICATIONS

1. SECTION 01100-2: Delete 1.02.B.2.f · “Materials and labor for scaffolding...”
2. SECTION 01330-4: In 1.04.A.8.a Replace “submit 3 blue or black” with  
“SUBMIT 6 BLUE OR BLACK”
3. SECTION 01330-6: In 1.06.A.1 · Insert “Submit three sets of full-sized...”
4. SECTION 01600-1: In 1.01.B.1 · Insert “01250, Contract Document  
Modification..”
5. SECTION 01770-2: Replace “1.04” with “1.03”.

B. STRUCTURAL SPECIFICATIONS

1. SECTION 05101-2: In 1.04.C · Delete “1. Submit requirements to Owner...”
2. SECTION 05101-2: In 1.04.C.2 · Replace “8 ft. and below” with “required for  
work in this section”
3. SECTION 05101-2: In 1.04.C · Delete “3. Where lifts and hoists extend...”
4. SECTION 05101-2: In 1.04.E.2 · Replace “8 ft. and below” with “required for  
work in this section”

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5. SECTION 05101-2: In 1.04.E.3 Delete "Where scaffolding and staging..."
  6. SECTION 05120-1: In 1.02.B.4 Replace "Light Gauge," with "Cold Formed."
  7. SECTION 05120-1: In 1.03.B. Delete "B. All steel staircase structures..."
  8. SECTION 05185-5: In 2.01.B. Delete "6. Metal Railings..."
  9. SECTION 05210-2: In 1.05.A. Delete "submit three (3) copies..."
  10. SECTION 05400-2: In 1.04.A. Delete "3. Submit calculations stamped..."

#### C. ARCHITECTURAL SPECIFICATIONS

1. SECTION 06100-1: In 1.01.A Delete "2. Fire-retardent-treated..." [Re-number]
2. SECTION 06160-2: In 2.01.D.3 Replace "1/2" with "3/4."
3. SECTION 06200-1: In 1.01.A.1.a Replace "fiber cement" with "PVC."
4. SECTION 06200-1: In 1.01.A.1.b Replace "fiber cement" with "PVC."
5. SECTION 06200-1: In 1.01.A.2 Delete "c. Standing and running trim..."
6. SECTION 06200-5: In 2.01.C Delete "1. Wood Veneer Faced...a.b.c."
7. SECTION 06200-5: In 2.01.E: Delete "E. Fiber Cement Board for Exterior Trim."
8. SECTION 07101-2: In 1.04.C.1: Replace "Submit requirements to Owner" with "Provide." Delete "when lifting and hoisting exceed 8 ft. in height."
9. SECTION 07101-2: In 1.04.C: Delete "2. All lifting and hoisting..." and "3. Where lifts and hoists..."
10. SECTION 07101-2: In 1.04.D.1: Replace "Submit requirements to Owner" with "Provide."
11. SECTION 07101-2: In 1.04.E: Delete "2. All scaffolding and staging..." and "3. Where scaffolding and staging..."
12. SECTION 07102-2: In 1.04.C.1: Replace "Submit requirements to Owner" with "Provide."
13. SECTION 07102-2: In 1.04.C.1: Delete "when lifting and hoisting exceed 8 ft in height"
14. SECTION 07102-2: In 1.04.C: Delete "2. All lifting and..." and "3. Where lifts and hoists..."
15. SECTION 07102-2: In 1.04.E.1: Delete "Submit requirements to Owner...exceeding 8 ft. in height" and replace with "Provide"
16. SECTION 07102-2: In 1.04.E: Delete "2. All scaffolding and staging..." and "3. Where scaffolding and staging..."
17. SECTION 07210-1: In 1.01.A.3.c Replace "elevator machinery rooms" with "wheelchair lift shaft wall."
18. SECTION 07210-1: In 1.01.A.4: Replace "icynene" with "polyurethane."
19. SECTION 07210-2: In 1.04. Delete "C. Recycled Content."
20. SECTION 07411-12: In 3.03.B.11: Replace "18" with "36."
21. SECTION 07460-1: In 1.01.B.2: Replace "exterior fiber cement" with "PVC."
22. SECTION 07460-1: In 1.02.C.1: Insert "smooth" before "...siding and trim..."
23. SECTION 07460-1: In 1.02.C.1: Delete "texture."
24. SECTION 07460-1: In 1.02.C.2: Insert "Lap" before "Siding."
25. SECTION 07460-1: In 1.02.C.2: After "width" insert ", (for 7 ¼" exposure)"
26. SECTION 07460-3: In 2.01.A: Correct numbering.
27. SECTION 08550-6: In 1.02.B: Insert "G. Massachusetts State Building Code Requirements."
28. SECTION 08550-2: In 2.01: Insert "I. Awning Electric Operator: Supplied by and installed by window manufacturer."
29. SECTION 08620-1: In 1.02.A: Insert "Massachusetts State Building Code." after "... skylight provisions of"

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30. SECTION 09255-3: In 2.01.C.6: Insert "(Abuse Resistant Type)" after "Glass-Mat Interior Gypsum Board."
  31. SECTION 09900-8-9: In 3.02.G: Correct numbering.
  32. SECTION 14420-2: In 2.02.A.1.b: Replace "39 in. x 60 in." with "38 in. x 69 in."
  33. SECTION 14420-3: In 2.02.B: Insert "(First floor)" after "Fire Rated Steel Door."
  34. SECTION 14420-3: In 2.02.C: Insert "(Second floor)" after "Personnel Gate."

#### E. PLUMBING

1. SECTION 15400-1: In 1.01: Replace "FILED SUB-BIDS" with "RELATED DOCUMENTS."
2. SECTION 15400-1: In 1.01: Delete "A. Section 15400 is stipulated..."
3. SECTION 15400-1: In 1.01: Change "B." to "A."
4. SECTION 15400-1: In 1.01: Delete "C. Time, manner, and requirements..."
5. SECTION 15400-1: In 1.01: Change "E." to "B."

#### F. HEATING, VENTILATING AND AIR CONDITIONING

1. SECTION 15600-1: In Part 1 - General: Delete Section 1.00, "Time, manner and Requirements...A-E" entirely.
2. SECTION 15600-2: In 1.02.A: Add "and other Trade Contractors" after "By the General Contractor."
3. SECTION 15600-2: In 1.02.A: Delete "2. General Conditions ..."
4. SECTION 15600-2: In 1.02.A.3: Insert "Structural" after "02300."
5. SECTION 15600-27: In 2.33.L: Replace "laboratory" with "exposed."

#### G. ELECTRICAL

1. SECTION 16000-1: In 1.1: Delete "SUBMITTING SUB-"
2. SECTION 16000-1: In 1.1: Delete "A., B., C., F., & G."
3. SECTION 16000-1: In 1.1.E: Replace "S.7" with "S.9"
4. SECTION 16000-1: In 1.2.A: Insert "Specifications and General Conditions," before "Drawings and Sections..."
5. SECTION 16000-3: In 1.5.B.9: Delete "in accordance with SECTION 07841 - THROUGH PENETRATION FIRESTOP SYSTEM."
6. SECTION 16000-3: In 1.5.B.9: Insert "required" after "provide all." Delete after DIVISION 16 work: "in accordance... FIRESTOP SYSTEM."
7. SECTION 16000-3: In 1.5.B.10: Replace "SECTION 0790-" with "07900"
8. SECTION 16000-8: In 1.17.B: Insert after "...by all trades:" "Coordination drawings required. See Division One."

## SECTION 01100

## SUMMARY

## PART 1 GENERAL

## 1.01 RELATED DOCUMENTS

- A. Contract Documents:
1. Work requirements are contained in Contract Documents and include cross-references to published information, which are not necessarily bound as part of this Project Manual.
  2. Drawings and Division 1 Specification Sections, apply to work and all Specification Sections of this Project.

## 1.02 WORK

- A. Scope of Work:
1. Renovation of and addition to existing preengineered steel gymnasium on concrete slab (approx. 5,400 sq. ft.).
  2. Floor is 5 ft. below adjacent bermed earth retained by concrete foundation walls with CMU on concrete.
  3. Addition of following:
    - a. Second Floor: Approx. 3,400 sq. ft.
    - b. Single Level Front Entry: Approx. 200 sq. ft.
    - c. Single Level Rear Exit and Mechanical/Sprinkler Room Next to Part of Existing Tunnel: Approx. 230 sq. ft.
- B. Contract Requirements:
1. General:
    - a. It has been determined to be in public interest that Owner serves as General Contractor for Project, in compliance with Letter from DCAM appended to this Section.
    - b. As result of issuance of Letter from DCAM, subcontractors and installers become Trade Contractors for this project.
    - c. Owner reserves right to issue scope of work to each Trade Contractor as purchase order or bid, with work of this Contract issued for all work or portion of work required.
  2. Responsibilities of Owner Serving as Contractor:
    - a. Review of contract documents and field conditions, in as much, as required to determine scope of work for each Trade Contractor, and coordination of work of this Contract.
    - b. Supervision and construction procedures.

- c. Permits, fees, notices, and compliance with laws, in as much, as required to coordinate each Trade Contractor.
  - d. Construction scheduling.
  - e. Materials and labor for heating in compliance with requirements of M.G.L. c149 §44F for all Trade Contractor whose work requires heating.
  - f. Materials and labor for scaffolding and lifts for lifts and hoists, staging and scaffolding to be provided as work of each Trade Contractor.
  - e. Cutting and patching of mis-timed or poorly sequenced work resulting from Owner's supervision and construction procedures.
  - f. Cleaning up of entire building, in addition to cleaning performed by each Trade Contractor, before final inspection is performed for occupancy.
3. Responsibilities of each Trade Contractor:
- a. Review of Contract Documents, including work of other Trade Contractors, and field conditions.
  - b. Supervision and construction procedures for scope of work of specific Trade Contractor.
  - c. Provide labor and material to perform scope of work of specific Trade Contractor.
  - d. Compliance with permits, fees, notices, and laws for work performed by specific Trade Contractor.
  - e. Superintendent for work of specific Trade Contractor.
  - f. Construction schedule to allow sequencing work by Owner for work of specific Trade Contractor.
  - g. Production of documents and site samples, including shop drawings, product data, and samples related to work of specific Trade Contractor.
  - h. Cutting and patching of previously placed work where mis-timed by work of specific Trade Contractor.
  - i. Cleaning up of areas where work of specific Trade Contractor was performed.
  - j. Payment of all royalty, patent, and copyright fees associated with work of specific Trade Contractor.
  - k. Indemnification of Owner, Architect and Architect's employees, Architect's Consultants and employees, and other Trade Contractors and employees from and against all claims, damages, loss or expense is attributable to sickness, disease, or death, or to injury to or destruction of tangible property caused by work of specific Trade Contractor.
4. Responsibility of Architect: Limited to requirements under license

issued by Commonwealth of Massachusetts and work performed under Owner/Architect Agreement for work of this Project.

#### 1.03 Trade Contractor USE OF PREMISES

- A. Use of Site:
  - 1. Limit use of premises to work in areas shown on plans.
  - 2. Confine operations to areas within limits indicated on Site Plan.
  - 3. Do not disturb portions of site beyond area in which work is indicated.
  
- B. Use of Existing Building:
  - 1. Maintain existing building in weathertight condition throughout construction period.
  - 2. Repair damage caused by construction operations.
  - 3. Take all precautions necessary to protect building and its occupants during construction period.

#### 1.04 MISCELLANEOUS PROVISIONS

- A. Accessibility Compliance: Full compliance with Massachusetts Architectural Accessibility Board (MAAB), prohibiting discrimination on basis of disability by public accommodations, is required for work of this Project.
  
- B. Prevention of Biological Contamination by Harmful Mold:
  - 1. Use construction methods and management procedures to ensure all building components having composition susceptible to mold infestation are protected until building envelope is complete and during remainder of construction operations through Final Completion, including management of protective measures specified in Sections.
  - 2. Exercise continuous quality control and monitor construction operations to enforce design requirements for protective measures, including work of Sections.
  - 3. Establish proper construction sequence of all building components contained in construction of building envelope to prevent moisture intrusion or retention that contribute to mold infestation, including erecting or placing necessary temporary weather protection during construction operations or any construction delays and ensure each Trade Contractor erect or place temporary weather protection specified in their respective Sections.
  - 4. Monitor interior humidity levels and provide proper ventilation during construction until HVAC system is operational.

5. Monitor formation of any moisture conditions in building, particularly surfaces that will be concealed from view by subsequent construction, determine and eliminate any source of moisture intrusion, and remove all moisture from observed areas.
  6. Ensure HVAC ducts are free of moisture during construction operations and have Section responsible for HVAC ducts eliminate source of moisture intrusion and remove all moisture from observed areas, including clogged or nonfunctioning condensation pans.
  7. Ensure spills, leaks, or water-generating construction activities are immediately dried out to prevent any possible mold growth; if spills, leaks, or water is caused or generated by Section, have that Section clean up and dry out surfaces.
  8. Note that mold cannot be removed from porous surfaces and requires full removal and replacement, including implementing measures to prevent spread of mold from infested materials to other building components.
- C. Energy Compliance:
1. Air Barrier:
    - a. Ensure air barrier for exterior wall is continuous.
    - b. Coordinate construction of exterior wall to permit inspection by testing agency of air barrier before insulation and cladding are installed.
    - c. If Architect determines exterior wall does not comply with requirements for continuous air barrier, reconstruct exterior wall and apply air barrier until approval is received from Architect.
  2. Comply with requirements of Owner for all energy compliance, including performing blower door test to verify whether air barrier complies with Code requirements.
- D. Blower Door Tests - Interim and Final (per CommMA Energy Code):
1. General:
    - a. Use calibrated blower door unit consisting of powerful fan(s) so unit can be mounted into frame of exterior door.
    - b. As fan(s) pulls air out of structure, lowering air pressure inside, higher outside air pressure then flows in through all unsealed cracks and openings.
    - b. Ensure that energy auditor uses smoke pencil (hand-held smoke puffer) or leak detection tool called pressure pan to detect air leaks to determine air infiltration rate of each residential unit.
    - c. Blower doors consist of frame and flexible panel that fit in doorway, variable-speed fan(s), pressure gauge to measure

- pressure differences inside and outside each residential unit, and airflow manometer and hoses for measuring airflow.
- d. Ensure energy auditor performs min. 5 air changes per hour at 50 Pascals differential pressure (5 ACH50).
2. Preparing for Blower Door Test: Ensure that energy auditor performs following steps to prepare each residential unit for blower door test.
    - a. Close windows and open interior doors.
    - b. Turn down thermostats on heaters and water heaters.
  3. Finding Air Leaks:
    - a. Close all openings within heated area of structure.
    - b. Seal special, powerful fan(s) within exterior-door opening so fan pulls air from structure.
    - c. Measure difference between indoor and outdoor air pressures, as well as air flow through fan(s) and adjust fan(s) to maintain constant pressure differential to take readings, which are used to calculate leakage rate with Blower Door running, pinpoint leaks using hand-held smoke puffer or leak detection tool called pressure pan.
    - d. Record exact locations of problem areas and submit report to Architect.
  4. Fixing Air Leaks: Seal identified leaks with insulating materials.
  5. Verify Fixing of Air Leaks:
    - a. After leaks are sealed, repeat blower door test to measure improvement on airtightness of structure.
    - b. Record any additional area that needs more sealing or that fixing air leak job has been done well.
    - c. Repeat, as required, until all leaks have been sealed.

#### 1.05 COORDINATION RESPONSIBILITIES

- A. Coordinate work of various Sections of Specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
- B. Verify characteristics of elements of interrelated operating equipment are compatible; coordinate work of various Sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Contract Document Review:
  1. Before execution of work, review all Drawings and Specifications and immediately report all errors, discrepancies, and/or omissions discovered to Architect, in writing, with one set of Contract



- Documents marked in red pencil clearly indicating discrepancies.
2. Omissions from Drawings and/or Specifications or misdescription of details of work that are manifestly necessary to carry out intent of Drawings and Specifications, or are customarily performed, shall not relieve Trade Contractor from performing such omitted or misdescribed details of work; but shall be performed as if fully and correctly set forth and described in Drawings and Specifications, using most appropriate method, with final approval issued by Architect to alleviate conflicts of scheduling, Drawings, Details, and/or Specifications.
  3. Design Intent:
    - a. Purpose of Drawings is to graphically depict characteristics and extent of Project.
    - b. Specifications included as part of Project Manual are provided to state material type, function, and source of materials.
    - c. Reference standards used in Specifications describe, by inference, specific materials and may include recommended methods of installation or application based on industry standards.
  4. Refer to Section 01250 for procedures for processing modification to Contract Documents due to changes to correct errors in Contract Documents, except where changes or clarifications were issued as Addenda during Bidding Process.

#### 1.06 FIELD ENGINEERING

- A. Provide field engineering services; establish grades, lines, and levels, by use of recognized engineering survey practices.
- B. Control datum for survey is that established by Owner-provided survey, shown on Drawings.
- C. Locate and protect control and reference points.

#### 1.07 REFERENCE STANDARDS

- A. Compliance: Work shall conform to standards published by recognized professional and industry organizations when referenced in this Project Manual.
- B. Edition Date of Reference Standards:
  1. Code Listing: Any reference to standards of any society, institute, association, or governmental agency that is part of building code in

effect for this Project shall comply with edition date published in referenced edition of Building Code.

2. Non-Code Listing: Any reference to standards of any society, institute, association, or governmental agency that is not part of Building Code for this Project shall be edition in effect at time of opening of Bids, except as otherwise specifically stated in this Project Manual.
3. Project Manual Listing: Edition dates listed with reference standards in each Section of this Project Manual are included for reference only.

- C. If reference standards are revised before completion of any part of work to which such revision would pertain, Trade Contractor may, if acceptable to Architect and if not violating Building Code, perform such work according to revised Specifications.

#### 1.08 ABBREVIATIONS

- A. Reference to technical society, institution, association, or governmental agency made in these Specifications is in form of standard acronym or abbreviation as published in Encyclopedia of Associations, published by Gale Research Co., available in most libraries.
- B. Use of abbreviations for technical terms in text of Specifications are restricted to most commonly used terms and comply with U.S. Government Printing Office Style Manual, published by U.S. Government Printing Office (GPO).

#### PART 2 PRODUCTS

NOT USED

#### PART 3 EXECUTION

NOT USED

END OF SECTION

## SECTION 01250

## CONTRACT DOCUMENT MODIFICATION PROCEDURES

## PART 1 GENERAL

## 1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing Contract Document modifications, consisting of following:
1. Minor changes in work, using Architect's Supplementary Instructions where change:
    - a. Does not involve other work.
    - b. Issues can be quickly resolved.
    - c. Does not change Construction Schedule or Contract sum.
  2. Change Orders initiated by any party working under this Contract Document may be required for many reasons including, but not limited to:
    - a. Changes in Project scope made at Owner's request.
    - b. Changes in Project scope to correct latent problems discovered during demolition or construction operations.
    - c. Changes made at Trade Contractor's request.
    - d. Changes made to more accurately achieve Project design intent.
    - e. Changes to correct Trade Contractor's errors.
    - f. Changes to correct Contract Documents errors.
    - g. Changes for Trade Contractor delay claims.
  3. Construction Change Directives.
- B. Related Sections:
1. 01100, Summary; for Contract Document review requirements before beginning Project work and procedures for reporting errors, discrepancies, and/or omissions discovered to Architect.
  2. 01330, Submittal Procedures; for administrative requirements for preparing and submitting Trade Contractor's Construction Schedule and Submittals Schedule.
  3. 01600, Product Requirements; for administrative requirements for Trade Contractor's selection of products.
  4. 01631, Product Substitutions; for administrative procedures for handling Requests for Substitutions of specified products, materials, equipment, or methods of construction made after Contract award.
  5. 01770, Closeout Procedures; for record document submittal

procedures.

- C. Changes during bidding issued as Addenda to Bidding Documents do not constitute construction modification to executed Contract.

#### 1.02 SUBMITTALS

- A. Form Preparation:
  - 1. Use following standard forms to request changes to Contract to speed processing time and allow Architect to complete review promptly and forward documents to Owner for implementation.
  - 2. Comply with procedures published on form for completing form.
- B. Applicable Forms:
  - 1. AIA Document G701: To authorize Change Order.
  - 2. AIA Document G709: To request proposal for Change Order.
  - 3. AIA Document G710: To issue Architect's supplemental instructions.
  - 4. AIA Document G714: To issue Construction Change Directive.

#### 1.03 STATUTORY REGULATIONS FOR PUBLIC CONSTRUCTION CONTRACTS

- A. Note that all instances of term 'Contractor' or 'subcontractor' occurring in M.G.L. is assumed to mean specific Trade Contractor work work of specific Trade Contractor for duration of this Project.

***M.G.L. c.7, §42E: The words defined in this section shall have the meanings set forth below whenever they appear in sections forty-two E to forty-two I, inclusive.***

***"Change order" shall mean a written order not requiring the consent of the contractor, signed by the project manager and designated as an approved change order, directing the contractor to make changes in the work within the general scope of the contract, or, any written or oral order from the project manager which causes any change in the work, provided that the contractor gives the commonwealth written notice stating the date, circumstances, and source of the order and that the contractor regards the order as a change order.***

***"Contract modification" shall mean any written alteration in plans or specifications, period of performance, price, quantity, or any other provision of the contract accomplished by mutual action of the parties to the contract.***

*The project manager may at any time, subject to the requirements set forth herein and in section thirty-nine I of chapter thirty, order changes in the work within the general scope of the contract, including but not limited to changes: (a) in the plans and specifications (including drawings and designs); (b) in the method or manner of performance of the work; (c) in the commonwealth furnished facilities, equipment, materials, services or site; or (d) in the schedule for performance of the work. All such orders shall be written and designated to be change orders. All change orders or other contract modifications shall require the approval of the director when: (a) the cumulative cost of all previously approved increases in the contract price exceeds five per cent of the original contracted construction cost of the project, or such other percentage or dollar amount or criteria as designated by regulations of the commissioner; or (b) the preliminary estimate of the change in the contract price resulting from the change order or contract modification is \$5,000 or more. The director may, after review of building projects for which the cumulative total of increases in the contract price has exceeded five per cent of the original contracted construction cost or such other percentage or dollar amount or criteria, direct the project manager as to those proposed changes, the preliminary estimated cost of which are under \$5,000, that shall require the director's approval.*

*The commissioner shall promulgate regulations governing the procedures for obtaining preliminary estimates and giving notice to the contractor as to the necessity of obtaining the director's approval before any work pursuant to a change order or contract modification is commenced. Such procedures shall be designed so as to avoid delays in the progress of the project.*

*The project manager may delegate to the resident engineer, subject to approval by the director and notice to parties in interest, his authority to process and approve change orders when authorized to do so by regulations of the commissioner.*

*The provisions of section twenty A of chapter twenty-nine shall not apply to any change order request submitted and acted upon in accordance with sections forty-two E through forty-two I, inclusive, of this chapter.*

**M.G.L. c.7, §42F: Requests for change orders**

*Any request for a change order shall be processed promptly, in compliance with regulations promulgated by the commissioner, and otherwise according to the requirements of section thirty-nine P of chapter thirty. Requests shall be submitted to the project manager, who shall, after consultation with the designer and the using agency, approve or disapprove the request. The project manager shall, after obtaining any other required approvals or disapprovals, notify in writing the designer, the using agency and the requesting party of the request and shall issue a written change order or written notice of disapproval to the contractor. If the approval or disapproval would result in a deviation, as defined by regulations of the commissioner from (a) any study or program which must be prepared in accordance with the provisions of section seven K of chapter twenty-nine or (b) any other pre-design document which must be prepared in accordance with any other statute, appropriation or authorization or administrative directive consistent therewith, the decision made shall be subject to appeal by the using agency to the commissioner of administration. Such appeal shall set forth in writing the reasons therefor and a copy thereof shall be furnished to the commissioner at the time the appeal is filed with the commissioner. The commissioner shall, within ten days following the receipt of such appeal, render a written decision thereon, which shall be final and conclusive.*

**M.G.L. c.7, §42G: Contract price adjustments**

*If any change order under section 42E causes any change in the contractor's cost of performance of any work under the contract, whether or not that work is changed by any order, either the contractor or the project manager may request an equitable adjustment in the contract price. A request for such an adjustment shall be in writing and shall be submitted by the party making such claim to the other party before commencement of the pertinent work or as soon thereafter as possible, and in any event within thirty days of receipt by the contractor of an approved change order or the mailing or furnishing to the commonwealth by the contractor of written notice that the contractor regards an order as a change order. Except for claims on defective specifications, no claim for any change under this section shall be allowed for any costs incurred more than twenty days before the contractor gives written notice as required by this section. In the case of defective specifications for which the commonwealth is responsible, the equitable adjustment shall include any cost reasonably incurred by the contractor in attempting to comply with such defective specifications.*

*The project manager and the contractor shall by negotiation agree upon an equitable adjustment in the contract price before commencement of the pertinent work or as soon thereafter as possible. Notice of the adjustment shall be given to the Director. In the absence of agreement by the parties on an equitable adjustment in the contract price, the project manager shall unilaterally determine the costs attributable to the change order. Unilateral equitable adjustments of the project manager shall be reduced to writing and a copy mailed or otherwise furnished to the contractor. Such adjustments shall be final and conclusive unless, within thirty days from the date of receipt of such copy, the contractor mails or otherwise furnishes to the project manager a written appeal addressed to the commissioner, and otherwise complies with the requirements set forth in section thirty-nine Q of chapter thirty. The provisions of said section shall govern further appeal to the division of hearing officers.*

**M.G.L. c.7, §42H: Cost and pricing data for contract modifications**

*The contractor shall submit, in accordance with regulations of the commissioner, cost and pricing data to be used when negotiating adjustments for change orders or other contract modifications. Such cost and pricing data shall be based on generally accepted accounting principles and be in conformity with the guidelines promulgated by the commissioner. Cost estimators employed within the division of capital asset management and maintenance shall review and evaluate cost and pricing data submitted by the contractor.*

*The contractor shall certify that, to the best of his knowledge and belief, the cost and pricing data submitted was accurate, complete, and current as of the date of submission. Any change order or contract modification under which a certificate is required shall contain a provision that the price to the commonwealth, including profit or fee, shall be adjusted to exclude any significant sums by which the commonwealth finds that such price was increased because the contractor-furnished cost or pricing data was inaccurate, incomplete, or not current as of the date of submission.*

*The provisions of section thirteen of chapter two hundred and fifty-eight of the General Laws, and the provisions of section sixty-seven A to section sixty-seven C, inclusive, of chapter two hundred and sixty-six, shall fully apply to the cost and pricing data certification requirements of this section.*

**M.G.L. c.7, §42I: General principles for equitable adjustments in contract prices**

*Equitable adjustments in the contract price negotiated pursuant to section forty-two G or as part of a contract modification shall be made in accordance with the following general principles. The commissioner shall promulgate regulations designed to implement the provisions of this section.*

1. *Adjustments in the contract price shall be made to the maximum extent feasible on a fixed price basis prior to the execution of the change order or contract modification, if this can be done without adversely affecting the interests of the Commonwealth.*
2. *Where a fixed price cannot be set due to difficulty in estimating the scope of the change ordered, adjustment may be made on a lump-sum guaranteed maximum price basis calculated by use of unit prices specified in the contract or agreed upon by the parties.*
3. *Cost reimbursement or time-and-materials methods of price adjustment shall not be used, except where, in the written opinion of the commissioner, no other pricing method is possible. When such pricing method is used, the contractor shall provide complete and accurate information disclosing the costs incurred in performing changes. The contractor shall maintain separate accounts, by job order or other suitable accounting procedure, of all segregable direct cost of work, both changed and not changed, allocable to the change. The commissioner shall promulgate regulations setting forth cost principles which shall be used to determine the allowability of incurred costs for the purpose of reimbursing costs.*

**M.G.L. c.30, §39I: Deviations from plans and specifications.**

*Every contractor having a contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or public works for the commonwealth, or of any political subdivision thereof, shall perform all the work required by such contract in conformity with the plans and specifications contained therein. No wilful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the awarding authority or by the engineer or architect in charge of the work who is duly authorized by the awarding authority to approve such deviations. In order to avoid delays in the prosecution of the work required by such contract such deviation from the plans or specifications may be authorized by a written order of the awarding authority or such engineer or architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating:*

- (1) if such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor;*
- (2) that the specified deviation does not materially injure the project as a whole;*
- (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the contractor and the amount in dollars of said adjustment; and*
- (4) that the deviation is in the best interest of the contracting authority.*

*Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for.*

*Whoever violates any provision of this section wilfully and with intent to defraud shall be punished by a fine of not more than five thousand dollars or by imprisonment for not more than six months, or both.*

**M.G.L. c.30, §39J: Public construction contracts; effect of decisions of contracting body or administrative board.**

*Notwithstanding any contrary provision of any contract for the construction, reconstruction, alteration, remodeling, repair or demolition of any public building or public works by the commonwealth, or by any county, city, town, district, board, commission or other public body, when the amount of the contract is more than five thousand dollars in the case of the commonwealth and more than two thousand dollars in the case of any county, city, town, district, board, commission or other public body, a decision, by the contracting body or by any administrative board, official or agency, or by any architect or engineer, on a dispute, whether of fact or of law, arising under said contract shall not be final or conclusive if such decision is made in bad faith, fraudulently, capriciously, or arbitrarily is unsupported by substantial evidence, or is based upon error of law.*

**M.G.L. c.30, §39N: Construction contracts; equitable adjustment in contract price for differing subsurface or latent physical conditions.**

*Every contract subject to M.G.L. c.149, §44A or subject to M.G.L. C.30, §39M shall contain the following paragraph in its entirety and an awarding authority may adopt reasonable rules or regulations in conformity with that paragraph concerning the filing, investigation and settlement of such claims:*

*If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.*

**M.G.L. c.30, §39O: Contracts for construction and materials; suspension, delay or interruption due to order of awarding authority; adjustment in contract price; written claim.**

*Every contract subject to the provisions of M.G.L. c.30, §39M or subject to M.G.L. c.149, §44A shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.*



**M.G.L. c.30, §39O:** *Contracts for construction and materials; suspension, delay or interruption due to order of awarding authority; adjustment in contract price; written claim.*

(a) *The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.*

(b) *The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and, except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim.*

**M.G.L. c.30, §39P:** *Contracts for construction and materials; awarding authority's decisions on interpretation of specifications, etc.; time limit; notice.*

*Every contract subject to M.G.L. c.30, §39M or M.G.L. c.149, §44A which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than 30 days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within 30 days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the 30 day period and the date by which the decision will be made.*

#### 1.04 MINOR CHANGES IN THE WORK

- A. Architect will issue Supplemental Instructions, as required, Authorizing Minor Changes in Work.

#### 1.05 CHANGE ORDER PROCESS

- A. Owner-Initiated Proposal Requests:
  - 1. General:
    - a. Architect will issue detailed description of proposed changes in work.
    - b. If necessary, description will include supplemental or revised Drawings and Specifications.
    - c. Proposal requests issued by Architect are for information only;

- do not consider proposal requests as instructions either to stop work in progress or to execute proposed change.
2. Within 20 days after receipt of proposal request, submit quotation estimating cost adjustments to Trade Contract Sum and Trade Contract Time necessary to execute change.
    - a. Include list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made; if requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include costs of labor and supervision directly attributable to change.
    - d. Include updated Trade Contractor's Construction Schedule that indicates effect of change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship; use available total float before requesting extension of Trade Contract Time.
- B. Trade Contractor-Initiated Proposals:
1. Latent Physical Conditions:
    - a. If latent or unforeseen conditions require modifications to Trade Contract, Trade Contractor may propose changes by submitting request for change to Architect.
    - b. Comply with provisions of M.G.L. c.30, §39N for processing changes for latent physical conditions.
    - c. Latent conditions have potential to delay work and increase construction costs and require processing to resolve problems in timely manner.
  2. Definitions: Following defines typical reasons for changing Contract due to latent physical conditions:
    - a. Unforeseen Conditions: Discovery of latent condition at variance with information presented in Contract Documents, where condition was not known or suspected, when work began and if condition was suspected, some investigation would have been authorized; unforeseen conditions require corrective action before Project can proceed and Change Order proposal is processed to correct problem caused by unforeseen condition.
    - b. Hazardous Substances: Discovery of suspected dangerous or hazardous substance during construction requires stoppage of construction operations when suspect material proves to be dangerous or hazardous substance and no work may be

- performed in area until material has been rendered harmless or has been lawfully removed from site, requiring Change Order proposal indicating Contract duration and cost change.
- c. Unrecorded Underground Utilities: Discovery of unforeseen underground utility lines not accurately documented, which delays construction progress while Owner tries to identify system and negotiate relocation with utility company and adjacent property owners, requiring Change Order proposal indicating Contract duration and cost change.
  - d. Unsound Building Structure - Renovation Work: Discovery of deteriorated or structurally unsound material that must be replaced or uncovering previously-covered surface disclosing construction that Owner wishes to keep rather than remove and requiring redesign of area, requiring Change Order proposal indicating Contract duration and cost change.
3. Change Statement:
    - a. Include statement outlining reasons for change and effect of change on Work.
    - b. Provide complete description of proposed change.
    - c. Indicate effect of proposed change on Trade Contract Sum and Trade Contract Time.
  4. Changed Quantities:
    - a. Include List of Quantities of products required or eliminated and Unit Costs, with total amount of purchases and credits to be made.
    - b. If requested, furnish survey data to substantiate quantities.
  5. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  6. Include costs of labor and supervision directly attributable to change.
  7. Changed Trade Construction Schedule: Include updated Trade Contractor's Construction Schedule that indicates effect of change including, but not limited to, changes in activity duration, start and finish times, and activity relationship.
  8. Comply with requirements in Section 01600 if proposed change requires substitution of one product or system for product or system specified.
- C. Change Order Procedures:
1. Submit claims for increased costs because of change in scope or nature of Allowance described in Contract Documents, whether for Purchase Order amount or Trade Contractor's handling, labor, installation, overhead, and profit.
  2. Submit claims within 21 days of receipt of Change Order or

3. Construction Change Directive authorizing work to proceed. Owner will reject claims submitted later than 21 days after such authorization.
4. Do not include Trade Contractor's indirect expense in Change Order cost amount, unless it is clearly shown that nature or extent of work has changed from what could have been foreseen from information in Contract Documents.
5. No change to Trade Contractor's indirect expense is permitted for selection of higher- or lower-priced materials or systems of same scope and nature as originally indicated.
6. After preliminary agreement between Owner, Architect/Engineer/ and Trade Contractor of Proposal Request, Owner will issue Change Order for signatures of Owner, Trade Contractor, and Architect.

#### 1.06 CONSTRUCTION CHANGE DIRECTIVE

- A. If Trade Contractor disagrees with terms of proposed Change Order, Architect will issue Construction Change Directive instructing Contractor to proceed with change in work to prevent delays to construction schedule.
- B. Construction Change Directive shall direct Trade Contractor to proceed with work and outline procedures for Owner and Trade Contractor to follow to mutually achieve adjustment in Trade Contract Sum and Trade Contract Time for disputed Change Order.
- C. Refer to requirements of General Conditions for methods to determine amount of Contract Adjustment.
- D. Documentation:
  1. For changes made by Construction Change Directive, furnish adequate supporting data to substantiate claims for additional compensation related to disputed Change Order.
  2. Maintain detailed records, on time and material basis, of work required by Construction Change Directive.
  3. After completion of change, submit itemized account and supporting data necessary to substantiate cost and time adjustments to Trade Contract.

#### PART 2 PRODUCTS

NOT USED

#### PART 3 EXECUTION

NOT USED  
END OF SECTION

## SECTION 01330

## SUBMITTAL PROCEDURES

## PART 1 GENERAL

## 1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for submittals required for performance of work, including:
1. Trade Contractor's Construction Schedule.
  2. Trade Contractor's Shop drawings.
  3. Trade Contractor's Product data.
  4. Trade Contractor's Samples.

## 1.02 SUBMITTAL PROCEDURES

- A. Coordination:
1. Coordinate preparation and processing of submittals with performance of construction activities.
  2. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
  3. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities requiring sequential activity.
  4. Coordinate transmittal of different types of submittals for related elements of work so processing will not be delayed by need to review submittals concurrently for coordination.
  5. Architect reserves right to withhold action on submittal requiring coordination with other submittals until related submittals are received.
- B. Processing:
1. Allow sufficient review time so installation will not be delayed as result of time required to process submittals, including time for resubmittals.
  2. Allow 2 weeks for initial review.
  3. Allow additional time if processing must be delayed to permit coordination with subsequent submittals.
  4. Architect will promptly advise Trade Contractor when submittal being processed must be delayed for coordination.
  5. If intermediate submittal is necessary, process same as initial submittal.

6. Allow 2 weeks for reprocessing each submittal.
  7. No extension of Contract Time will be authorized because of failure to transmit submittals to Architect sufficiently in advance of work to permit processing.
- C. Submittal Preparation:
1. Place permanent label or title block on each submittal for identification.
  2. Indicate name of entity who prepared each submittal on label or title block.
  3. Provide space approximately 4 in. x 5 in. on label or beside title block on shop drawings to record Trade Contractor's review and approval markings and action taken.
  4. Include following information on label for processing and recording action taken:
    - a. Project Name.
    - b. Date.
    - c. Name and address of Architect.
    - d. Name and address of Trade Contractor.
    - e. Name and address of Supplier.
    - f. Name of Manufacturer.
    - g. Number and Title of appropriate Specification Section.
    - h. Drawing Number and Detail References, as appropriate.
- D. Submittal Transmittal:
1. Package each submittal appropriately for transmittal and handling.
  2. Transmit each submittal from Trade Contractor to Architect using transmittal form.
  3. Submittals received from sources other than Trade Contractor will be returned without action.
  4. On transmittal record relevant information and requests for data.
  5. On Form, or Separate Sheet, record deviations from Contract Document requirements, including minor variations and limitations.
  6. Include Trade Contractor's certification that information complies with Contract Document requirements.
- 1.03 Trade Contractor'S CONSTRUCTION SCHEDULE
- A. Bar-Chart Schedule:
1. Prepare fully developed, horizontal bar-chart-type Trade Contractor's Construction Schedule.
  2. Submit within 30 days of date established for start of work.
  3. Provide separate time bar for each significant construction activity.

4. Provide continuous vertical line to identify first working day of each week.
5. Use same breakdown of units of work as indicated in Schedule of Values.
6. Within each time bar indicate estimated completion percentage in 10 percent increments.
7. As work progresses, place contrasting mark in each bar to indicate Actual Completion.
8. Prepare Schedule on sheet, or series of sheets, of stable transparency, or other reproducible media, of sufficient width to show data for entire construction period.
9. Secure time commitments for performing critical elements of work from parties involved.
10. Coordinate each element on Schedule with other construction activities; include minor elements involved in sequence of work.
11. Show each activity in proper sequence.
12. Indicate graphically sequences necessary for completion of related portions of work.
13. Indicate completion in advance of date established for Substantial Completion.
14. Indicate Substantial Completion on Schedule to allow time for Architect's procedures necessary for certification of Substantial Completion.
15. Area Separations:
  - a. Provide separate time bar to identify each major construction area for each major portion of work.
  - b. Indicate where each element in area must be sequenced or integrated with other activities.
16. Cost Correlation:
  - a. At head of Schedule, provide two-item cost correlation line, indicating precalculated and actual costs.
  - b. On line shown dollar-volume of work performed as of dates used for preparation of payment requests.
17. Distribution:
  - a. Following response to initial submittal, print and distribute copies to Architect, Owner, and other parties required to comply with scheduled dates.
  - b. Post copies in Project Meeting Room and Temporary Field Office.
  - c. When revisions are made, distribute to same parties and post in same locations.
  - d. Delete parties from distribution when they have completed their assigned portion of work and are no longer involved in



- construction activities.
18. Schedule Updating:
    - a. Revise Schedule after each meeting or activity, where revisions have been recognized or made.
    - b. Issue updated Schedule concurrently with report of each meeting.

#### 1.04 SHOP DRAWINGS

##### A. General:

1. Submit newly prepared information, drawn to accurate scale.
2. Highlight, encircle, or otherwise indicate deviations from Contract Documents.
3. Do not reproduce Contract Documents or copy standard information as basis of shop drawings.
4. Standard information prepared without specific reference to Project is not considered shop drawings.
5. Shop drawings include Fabrication and Installation Drawings, Setting Diagrams, Schedules, Patterns, Templates, and similar Drawings.
6. Include following information:
  - a. Dimensions.
  - b. Identification of products and materials included.
  - c. Compliance with specified standards.
  - d. Notation of coordination requirements.
  - e. Notation of dimensions established by field measurement.
7. Sheet Size: Except for templates, patterns, and similar full-size Drawings, submit shop drawings on sheets at least 8-1/2 in. x 11 in., but no larger than 24 in. x 36 in.
8. Submittal:
  - a. Submit 3 blue or black-line prints and 2 additional prints where required for maintenance manuals, and number of prints needed by Architect for distribution; digital submissions will not be accepted.
  - b. 3 prints will be retained; remainder returned.
  - c. Mark up and maintain one of returned prints as Record Document.
9. Do not use shop drawings without appropriate final stamp indicating action taken in connection with construction.

##### B. Coordination Drawings:

1. A special type of shop drawing showing relationship and integration of different construction elements requiring careful coordination during fabrication or installation to fit in space provided or function as

intended, required for plumbing, fire protection, HVAC, and electrical work.

2. Preparation of coordination drawings may include components previously shown in detail on shop drawings or product data.
3. Submit Coordination Drawings for integration of different construction elements.
4. Show sequences and relationships of separate components to avoid conflicts in use of space.

#### 1.05 PRODUCT DATA

##### A. General:

1. Collect product data into single submittal for each element of construction or system.
2. Product data includes printed information such as Manufacturer's Installation Instructions, Catalog Cuts, Standard Color Charts, Roughing-In Diagrams and Templates, Standard Wiring Diagrams, and Performance Curves.
3. Where product data must be specially prepared because standard printed data is not suitable for use, submit as shop drawings.
4. Mark each copy to show applicable choices and options.
5. Where printed product data includes information on several products, some of which are not required, mark copies to indicate applicable information.
6. Include following information:
  - a. Manufacturer's printed recommendations.
  - b. Compliance with recognized Trade Association standards.
  - c. Compliance with recognized Testing Agency standards.
  - d. Application of Testing Agency Labels and Seals.
  - e. Notation of dimensions verified by field measurements.
  - f. Notation of coordination requirements.
7. Do not submit product data until compliance with requirements of Contract Documents has been confirmed.

##### B. Material Safety Data Sheets (MSDS):

1. Submit three copies of MSDS for all products scheduled or planned for use on Project.
2. Notate in Submittal Schedule submission sequence for submission of MSDS.
3. Do not purchase any products until MSDS have been submitted to Architect and reviewed.
4. Label MSDS with Project Manual Section Number.

- C. Preliminary Submittal: Submit preliminary single copy of product data where selection of options is required.
- D. Submittals:
  - 1. Submit 2 copies of each required submittal; submit 4 copies where required for Maintenance Manuals.
  - 2. Architect will retain one, and will return other marked with action taken and corrections or modifications required.
  - 3. Unless noncompliance with Contract Document provisions is observed, submittal may serve as final submittal.
- E. Distribution:
  - 1. Furnish copies of final submittal to installers, suppliers, manufacturers, fabricators, and others required for performance of construction activities; show distribution on Transmittal Forms.
  - 2. Do not proceed with installation until applicable copy of product data applicable is in installer's possession.
  - 3. Do not permit use of unmarked copies of product data in connection with construction.

#### 1.06 SAMPLES

- A. General:
  - 1. Submit full-size, fully fabricated samples cured and finished as specified and physically identical with material or product proposed.
  - 2. Samples include Partial Sections of Manufactured or Fabricated Components, Cuts or Containers of Materials, Color Range Sets, and Swatches showing color, texture, and pattern.
  - 3. Mount, display, or package samples in manner specified to facilitate review of qualities indicated.
  - 4. Prepare samples to match Architect's sample.
  - 5. Include following:
    - a. Generic description of sample.
    - b. Sample source.
    - c. Product name or name of manufacturer.
    - d. Compliance with recognized Standards.
    - e. Availability and delivery time.
  - 6. Submit samples for review of kind, color, pattern, and texture, for final check of these characteristics with other elements, and for comparison of these characteristics between final submittal and actual component as delivered and installed.
  - 7. Where variation in color, pattern, texture, or other characteristics are inherent in material or product represented, submit min. 3 multiple

- units showing approximate limits of variations.
8. Refer to other Specification Sections for requirements for samples illustrating installation, fabrication techniques, details of assembly, connections, operations, and similar construction characteristics.
  9. Refer to other Sections for samples to be returned to Trade Contractor for incorporation in work; such samples must be undamaged at time of use.
  10. On Transmittal, indicate special requests regarding disposition of sample submittals.
- B. Preliminary Submittals:
1. Where samples are for selection of color, pattern, texture, or similar characteristics from range of standard choices, submit full set of choices for material or product.
  2. Preliminary submittals will be reviewed and returned with Architect's mark indicating selection and other action.
- C. Submittals:
1. Except for samples illustrating assembly details, installation, fabrication techniques, connections, operation, and similar characteristics, submit 4 sets; 3 will be returned marked with action taken.
  2. Maintain sets of samples, as returned, at Project site, for quality comparisons throughout course of construction.
  3. Unless noncompliance with Contract Document provisions is observed, submittal may serve as final submittal.
  4. Sample sets may be used to obtain final Acceptance of construction associated with each set.
- D. Distribution of Samples:
1. Prepare and distribute additional sets to manufacturers, fabricators, suppliers, installers, and others as required for performance of work.
  2. Show distribution on Transmittal Forms.
- E. Field Samples:
1. Specified in individual Sections are special types of samples.
  2. Field samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish standard by which work will be judged.
  3. Comply with submittal requirements to fullest extent possible.
  4. Process Transmittal Forms to provide record of activity.

#### 1.07 ARCHITECT'S ACTION

- A. General:
1. Except for submittals for record, information, or similar purposes, where action and return is required or requested, Architect will review each submittal, mark to indicated action taken, and promptly return.
  2. Compliance with specified characteristics is Trade Contractor's responsibility.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

NOT USED

END OF SECTION

## SECTION 01600

## PRODUCT REQUIREMENTS

## PART 1 GENERAL

## 1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements governing Contractor's selection of products for use in Project where named by specific manufacturer and/or product or described by physical properties without naming manufacturer and/or product.
- B. Related Sections:
1. 01250, Contract Modification Procedures; for processing and adjusting Contract due to changes in work.
  2. 01330, Submittal Procedures; for Contractor's Construction Schedule and Schedule of Submittals.
  3. 01631, Product Substitutions; for procedures related to substitution requests for specified products, materials, equipment, or construction methods.
- C. Definitions:
1. General:
    - a. Definitions used in this Article are not intended to change meaning of other terms used in Contract Documents, such as, specialties, systems, structure, finishes, accessories, and similar terms.
    - b. Such terms are self-explanatory and have well-recognized meanings in construction industry.
  2. Products:
    - a. Items purchased for incorporation in work, whether purchased for Project or taken from previously purchased stock.
    - b. The term product includes terms material, equipment, system, and terms of similar intent.
    - c. Named Products: Items identified by manufacturer's product name, including make or model designation, indicated in manufacturer's published product literature, current as of date of Contract Documents.
  3. Materials: Products substantially shaped, cut, worked, mixed, finished, refined, or otherwise fabricated, processed, or installed to form part of work.
  4. Equipment: Product with operational parts, whether motorized or

manually operated, requiring service connections such as wiring or piping.

## 1.02 SUBMITTALS

### A. Product List Schedule:

1. Prepare Schedule showing products specified in tabular form acceptable to Architect.
2. Include generic names of products required.
3. Include manufacturer's name and proprietary product names for each item listed.
4. Coordinate Product List Schedule with Owner/Contractor's Construction Schedule and Schedule of Submittals.
5. Form: Prepare Product Listing Schedule with information on each item tabulated under following column headings.
  - a. Related Specification Section number.
  - b. Generic name as used in Contract Documents.
  - c. Proprietary name, model number, and similar designations.
  - d. Manufacturer's name and address.
  - e. Supplier's name and address.
  - f. Trade Contractor's name and address.
  - g. Projected delivery date, or time span of delivery period.

### B. Submittal:

1. Within 30 days after date of commencement of work, submit 3 copies of initial Product List Schedule.
2. Provide written explanation for omissions of data, and for known variations from Contract requirements.
3. At Contractor's option, initial submittal may be limited to product selections and designations that must be established early in Contract period.

### C. Completed Schedule:

1. Within 60 days after commencement of work, submit 3 copies of completed Product List Schedule.
2. Provide written explanation for omissions of data and for known variations from Contract requirements.

### D. Architect's Action:

1. Architect will respond to Contractor in writing within 2 weeks of receipt of completed Product List Schedule.
2. No response within this time constitutes no objection to listed products or manufacturers, but does not constitute waiver of

- requirement that products comply with Contract Documents.
3. Architect's response will include following: List of unacceptable product selections, containing brief explanation of reasons for this action.

### 1.03 QUALITY ASSURANCE

#### A. Source Limitations:

1. To fullest extent possible, provide products of same kind, from single source.
2. When specified products are available only from sources that do not or cannot produce quantity adequate to complete Project requirements in timely manner, consult with Architect for determination of most important product qualities before proceeding.
3. Qualities may include attributes relating to visual appearance, strength, structural, durability, or compatibility.
4. When determination has been made, select products from sources that produce products possessing these qualities, to fullest extent possible.

#### B. Compatibility of Options:

1. When Trade Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.
2. Each Trade Contractor is responsible for providing products and construction methods compatible with products and construction methods of other prime or separate Contractors.
3. If dispute arises between Trade Contractors over concurrently selectable, but incompatible products, Architect will determine which products shall be retained and which are incompatible and must be replaced.

#### C. Nameplates:

1. Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on exterior.
2. Labels: Locate required product labels and stamps on concealed surface or, where required for observation after installation, on accessible surface that is not conspicuous.
3. Equipment Nameplates:
  - a. Provide permanent nameplate on each item of service-



- connected or power-operated equipment.
- b. Locate on easily accessible surface that is inconspicuous in occupied spaces.
- c. Nameplate shall contain following information and other essential operating data: Name of Product or Manufacturer, Model and Serial Number, Capacity, Speed, Ratings.

#### 1.04 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products in accordance with manufacturer's recommendations, using means and methods to prevent damage, deterioration and loss, including theft.
- B. Delivery:
  - 1. Schedule delivery to minimize long-term storage at site and to prevent overcrowding of construction spaces.
  - 2. Coordinate delivery and installation to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
  - 3. Deliver products to site in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 4. Inspect products on delivery to ensure compliance with Contract Documents, and to ensure products are undamaged and properly protected.
- C. Storage:
  - 1. Store products at site to facilitate inspection and measurement of quantity or counting of units.
  - 2. Store heavy materials away from Project structure in manner that will not endanger supporting construction.
  - 3. Store products subject to damage by elements above ground, under cover in weathertight enclosure, with ventilation adequate to prevent condensation.
  - 4. Maintain temperature and humidity within range required by manufacturer's instructions.

### PART 2 PRODUCTS

#### 2.01 PRODUCT SELECTION

- A. General Product Requirements:
  - 1. Provide undamaged products complying with Contract Documents

- and, unless otherwise indicated, unused at time of installation.
2. Provide products complete with all accessories, trim, finish, safety guards, and other devices and details needed for complete installation and for intended use and effect.
  3. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  4. Criteria specified in each Section for Low VOC or Zero VOC products is not a requirement for determining which products are used on Project.
- B. Product Selection Procedures:
1. Product selection is governed by Contract Documents and governing regulations, not by previous Project experience.
  2. Semiproprietary Specification Requirements:
    - a. Where three or more products or manufacturers are named, provide one of indicated products.
    - b. Where products or manufacturers are specified by name, it is inferred terms "or equal," or "or approved equal," are included in compliance with M.G.L. Chapter 30, §39M; comply with Section 01631 concerning "substitutions" for "or equal," or "or approved equal," to obtain approval for use of unnamed product; substitutions will be processed as Change Order Requests.
  3. Performance Specification Requirements:
    - a. Where Specifications require compliance with performance requirements, provide products complying with these requirements, and are recommended by manufacturer for application indicated.
    - b. General overall performance of product is implied where product is specified for specific application.
    - c. Manufacturer's recommendations may be contained in published product literature, or by manufacturer's certification of performance.
  4. Compliance with Standards, Codes and Regulations: Where Specifications only require compliance with imposed code, standard, or regulation, select product complying with standards, codes, or regulations specified.
  5. Visual Matching:
    - a. Where Specifications require matching established sample, Architect's decision will be final on whether proposed product matches satisfactorily.
    - b. Where no product available within specified category matches

satisfactorily and also complies with other specified requirements, comply with provisions of Contract Documents concerning "substitutions" for selection of matching product in another product category, or for noncompliance with specified requirements.

6. Visual Selection:
  - a. Where specified product requirements include phrase ". . . as selected from manufacturer's standard colors, patterns, textures . . ." or similar phrase, select product and manufacturer complying with other specified requirements.
  - b. Architect will select color, pattern, and texture from product line selected.

### PART 3 EXECUTION

#### 3.01 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer's instructions and recommendations for installation of products in applications indicated.
- B. Anchor each product securely in space, accurately located, and aligned with other work.
- C. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION

## SECTION 01631

## PRODUCT SUBSTITUTIONS

## PART 1 GENERAL

## 1.01 SUMMARY

- A. Section Includes administrative and procedural requirements for processing substitution requests for specified products, materials, equipment, or methods of construction in Specification Sections when made after Contract award.
- B. Related Sections:
  - 1. 01250, Contract Modification Procedures; for processing and adjusting Contract due to changes in work.
  - 2. 01330, Submittal Procedures; for requirements related to submitting Trade Contractor's Construction Schedule and submittal Schedule.
  - 3. 01600, Product Requirements; for requirements governing Trade Contractor's selection of products and product options specified in Specification Sections.
- C. Definitions:
  - 1. General: Definitions in this Article do not change or modify meaning of other terms used in Contract Documents.
  - 2. Substitutions: Changes in products, materials, equipment, and methods of construction required by Contract Documents and proposed by Trade Contractor after Contract Award are considered requests for substitutions; substitutions will be processed as Change Order Requests.
  - 3. Nonsubstitutions: Following criteria are not considered to be requests for substitutions:
    - a. Substitutions requested during bidding period and accepted by Addendum before Contract award are included in Contract Documents and are not subject to requirements specified in this Section for substitutions.
    - b. Revisions to Contract Documents requested by Owner or Architect.
    - c. Specified options of products and construction methods included in Contract Documents.
    - d. Trade Contractor's determination of, and compliance with, governing regulations and orders issued by governing authorities.

- D. Deviations from Plans and Specifications:
- A. Note that all instances of term 'Contractor' or 'subcontractor' occurring in M.G.L. is assumed to mean specific Trade Contractor work work of specific Trade Contractor for duration of this Project.

**M.G.L. c.30, §39I: Deviations from plans and specifications.**

*Every contractor having a contract for the construction, alteration, maintenance, repair or demolition of, or addition to, any public building or public works for the commonwealth, or of any political subdivision thereof, shall perform all the work required by such contract in conformity with the plans and specifications contained therein. No wilful and substantial deviation from said plans and specifications shall be made unless authorized in writing by the awarding authority or by the engineer or architect in charge of the work who is duly authorized by the awarding authority to approve such deviations. In order to avoid delays in the prosecution of the work required by such contract such deviation from the plans or specifications may be authorized by a written order of the awarding authority or such engineer or architect so authorized to approve such deviation. Within thirty days thereafter, such written order shall be confirmed by a certificate of the awarding authority stating:*

- (1) if such deviation involves any substitution or elimination of materials, fixtures or equipment, the reasons why such materials, fixtures or equipment were included in the first instance and the reasons for substitution or elimination, and, if the deviation is of any other nature, the reasons for such deviation, giving justification therefor;*
- (2) that the specified deviation does not materially injure the project as a whole;*
- (3) that either the work substituted for the work specified is of the same cost and quality, or that an equitable adjustment has been agreed upon between the contracting agency and the contractor and the amount in dollars of said adjustment; and*
- (4) that the deviation is in the best interest of the contracting authority.*

*Such certificate shall be signed under the penalties of perjury and shall be a permanent part of the file record of the work contracted for.*

*Whoever violates any provision of this section wilfully and with intent to defraud shall be punished by a fine of not more than five thousand dollars or by imprisonment for not more than six months, or both.*

1.02 SUBMITTALS

- A. Substitution Request Submittal:
1. General:
    - b. Request received not in compliance with the requirements following, may be considered or rejected, at Architect's discretion.
  2. Submit 3 copies of each substitution request for consideration, using forms and procedures required for Change Order Proposals.

3. Identify product or fabrication or installation method to be replaced in each request, including related Specification Section and Drawing numbers.
  4. Provide complete documentation showing compliance with requirements for substitutions, and following information, as appropriate:
    - a. Coordination information, including list of changes or modifications needed to other parts of work and to construction performed by Owner and separate Trade Contractors, that will be necessary to accommodate proposed substitution.
    - b. Detailed comparison of significant qualities of proposed substitution with those of work specified, in tabular format with significant qualities including elements applicable to product, material, equipment, or method of construction being proposed for substitution to include such items as performance, life cycle cost, resale value, adjustments due to incompatibility with other work, energy usage, risks of delays, physical properties, weight, size, durability, and visual effect.
    - c. Product data, including drawings and description of products and fabrication and installation procedures.
    - d. Samples, where applicable or requested.
    - e. Statement indicating substitution's effect on Trade Contractor's Construction Schedule compared to Schedule without approval of substitution, indicating effect of proposed substitution on overall Contract Time.
    - f. Cost information, including proposal of net change, if any, in Contract Sum.
    - g. Trade Contractor's certification that proposed substitution conforms to requirements in Contract Documents in every respect and is appropriate for applications indicated.
    - h. Trade Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of substitution to perform adequately.
- B. Architect's Action:
1. On receipt of product substitution request, Architect will perform initial analysis of request and submit fee proposal to Trade Contractor for cost of processing substitution request; Architect reserves right to waive fee on case-by-case (submittal) basis, dependent on extent of review and determination whether substitution conforms to intent of M.G.L. Chapter 30, §39M.
  2. Trade Contractor shall countersign fee proposal and return with payment.

3. If necessary, Architect will request additional information or documentation for evaluation within one week of receipt of request for substitution.
4. Architect will notify Trade Contractor of acceptance or rejection of substitution within two weeks of receipt of request, or one week of receipt of additional information or documentation, whichever is later.
5. Acceptance will be in form of Change Order, with acceptance by Architect for suitability only; Trade Contractor to hold Architect harmless for compliance with design and codes for use of substitution.
6. Use product specified, if Architect cannot make decision on use of proposed substitute within time allocated.

## PART 2 PRODUCTS

### 2.01 SUBSTITUTIONS

#### A. Conditions for Substitution Consideration:

1. General:
  - a. Architect will receive and consider Trade Contractor's substitution request when one or more of following conditions are satisfied, as determined by Architect.
  - b. If following conditions are not satisfied, Architect will return substitution request without action, except to record noncompliance with these requirements.
2. Extensive revisions to Contract Documents are not required.
3. Proposed substitution, with changes, are in keeping with general intent of Contract Documents.
4. Substitution request is timely, fully documented, and properly submitted; incomplete requests are subject to immediate rejection.
5. Specified product or construction method cannot be provided within Contract time.
6. Substitution request is directly related to "Or Equal" clause or similar language in Contract Documents.
7. Requested substitution offers Owner substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities Owner must assume, such as compensation to Architect for redesign and evaluation services, increased cost of other construction by Owner, and similar considerations.

#### B. Rejection of Substitution Request:

1. If substitution request is result of Trade Contractor's failure to pursue

work promptly or coordinate construction activities, substitution request is subject to immediate rejection and Trade Contractor shall be assessed for all penalties for such failures.

2. If substitution request is rejected, arrange for and deliver specified product or begin specified construction method.
3. Adjust Construction Schedule and Submittal Schedule accordingly to accommodate Trade Contractor's failure to pursue work and coordinate construction activities.
4. Due to Trade Contractor's failure to pursue work and coordinate construction activities as defined in this Section, Owner may assess penalties for damages resulting due to extended Construction Schedule and inability of Owner to take possession of Project for each calendar day of delay until work is Substantially Complete, at rate established by Owner when Trade Contractor's failure is discovered.

C. Submittal's Disclaimer:

1. Trade Contractor's submission of shop drawings, product data, or samples under requirements of Section 01330 for construction products, materials, equipment, and construction methods not complying with Contract Documents, do not constitute acceptable or valid substitution request.
2. Architect's inadvertent acceptance of such submissions of shop drawings, product data, or samples under requirements of Section 01330 for construction products, materials, equipment, and construction methods not complying with Contract Documents does not constitute approval of such submissions.
3. When Architect discovers submission of any shop drawings, product data, or samples under requirements of Section 01330 for construction products, materials, equipment, and construction methods not complying with Contract Documents, Trade Contractor shall immediately remove nonconforming work and shall pay for corrections to work due to nonconforming work.

PART 3 EXECUTION

NOT USED

END OF SECTION



SECTION 01731

CUTTING AND PATCHING

PART 1 GENERAL

1.01 QUALITY ASSURANCE

A. General:

1. This Section specifies coordination and procedural requirements related to cutting and patching work.
2. Cutting and Patching is Defined:
  - a. Cutting work in place to install or attach something to or in existing surface or newly constructed work of the Contract Documents.
  - b. Cutting work in place to make various parts of total assembly fit together properly or to adjust size of previously-prepared opening to make something fit as integral part of finishing process.
  - c. Cutting preexisting construction in place before starting work of this Contract, where total or selective demolition is not scheduled, to make something fit as integral part of work of this Contract.
  - d. Cutting work in place to provide samples for conformance with Contract requirements or preexisting surface to allow inspection of partially-concealed construction.
3. Selective demolition, involves total removal of designated preexisting construction to extent shown, with patching to repair remaining preexisting construction exposed by selective demolition.
4. Perform all cutting and patching of preexisting and new construction as required for proper completion, integration, and execution of work of Contract as work of this Section, except where cutting and patching is specified to be performed by specific Specification Sections.

1.02 SUBMITTALS

A. Responsibility for Cutting and Patching:

1. Owner pays all fees and costs associated with any cutting and patching required, where Owner mis-timed or mis-sequenced work of this Contract.
2. Trade Contractor pays all fees and costs associated with any cutting and patching required, where Trade Contractor mis-timed or mis-

sequenced work of Trade Contractor.

- B. Procedural Proposal for Cutting and Patching:
1. When approval of procedures for cutting and patching is required, Trade Contractor shall submit proposed procedures for work well before time work will be performed and request approval to proceed.
  2. Include following information, as applicable, in submittal:
    - a. Describe extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
    - b. Describe anticipated results of work in terms of changes to existing work including structural, operational, and visual changes, and other significant elements.
    - c. List products to be used and firms that will perform work.
    - d. Give dates when work is expected to be performed.
    - e. List utilities that will be disturbed or affected by work, including those that will be relocated and those that will be out of service temporarily.
    - f. Indicate how long utility service will be disrupted.
  3. Where cutting and patching structural work involves addition of reinforcement, submit details and engineering calculations to show how that reinforcement is integrated with original structure to satisfy requirements.
  4. Approval by Architect to proceed with cutting and patching work does not waive Architect's right to later require complete removal and replacement of work found unsatisfactorily cut and patched.

## PART 2 PRODUCTS

### 2.01 MATERIALS

- A. General:
1. Except as otherwise indicated or as directed by Architect, use materials for cutting and patching that are identical to existing materials.
  2. If identical materials are not available or cannot be used, use materials that match existing adjacent surfaces to fullest extent possible regarding visual effect.
  3. Use materials for cutting and patching that will result in equal, or better, performance characteristics.

## PART 3 EXECUTION

### 3.01 INSPECTION

- A. General:
  - 1. Before cutting, examine surfaces to be cut and patched and conditions under which work is to be performed.
  - 2. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding with work.
- B. Coordination:
  - 1. Before start of cutting work, meet at work Site with all parties involved in cutting and patching, including mechanical and electrical trades.
  - 2. Review areas of potential interference and conflict between various trades.
  - 3. Coordinate layout of work and resolve potential conflicts before proceeding with work.

### 3.02 PREPARATION

- A. Temporary Support: Each Trade Contractor shall provide temporary support of work to be cut.
- B. Protection:
  - 1. Each Trade Contractor shall protect existing construction during cutting and patching to prevent damage.
  - 2. Each Trade Contractor shall provide protection from adverse weather conditions for that part of Project that may be exposed during cutting and patching operations.
  - 3. Each Trade Contractor shall avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
  - 4. Each Trade Contractor shall take precautions not to cut existing pipe, conduit, or duct serving Building but scheduled to be relocated until provisions have been made to bypass them.

### 3.03 PERFORMANCE

- A. General:
  - 1. Each Trade Contractor shall cut existing construction using methods least likely to damage elements to be retained or adjoining construction.
  - 2. Each Trade Contractor shall where possible, review proposed procedures with original installer; comply with original installer's recommendations.
  - 3. Each Trade Contractor shall where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering and chopping.

4. Each Trade Contractor shall cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces.
  5. Each Trade Contractor shall temporarily cover openings when not in use.
  6. To avoid marring existing finished surfaces, each Trade Contractor shall cut or drill from exposed or finished side into concealed surfaces.
  7. Each Trade Contractor shall cut through concrete and masonry using cutting machine such as carborundum saw or diamond core drill.
  8. Each Trade Contractor shall comply with requirements of applicable Sections of Division 2, Sitework, where cutting and patching requires excavating and backfilling.
- B. Pipe and Conduit:
1. Each Trade Contractor shall bypass utility services such as pipe and conduit, before cutting, where such utility services are shown or required to be removed, relocated, or abandoned.
  2. Each Trade Contractor shall cut off conduit and pipe in walls or partitions to be removed.
  3. After bypassing and cutting, each Trade Contractor shall cap, valve, or plug and seal tight remaining portion of pipe and conduit to prevent entrance of moisture or other foreign matter.
- C. Patching:
1. Each Trade Contractor shall patch with seams that are durable and as invisible as possible.
  2. Each Trade Contractor shall comply with specified tolerances for work.
  3. Where feasible, each Trade Contractor shall inspect and test patched areas to demonstrate integrity of work.
  4. Each Trade Contractor shall restore exposed finishes of patched areas.
  5. Where necessary, each Trade Contractor shall extend finish restoration into retained adjoining work in way that will eliminate evidence of patching and refinishing.
- D. Walls and Partitions:
1. Where removal of walls or partitions extends one finished area into another finished area, each Trade Contractor shall patch and repair floor and wall surfaces in new space to provide an even surface of uniform color and appearance.
  2. Each Trade Contractor shall remove existing floor and wallcoverings and replace with new materials.

- E. Painted Surfaces: Where patch occurs in smooth painted surface, each Trade Contractor shall extend final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coat.
- F. Ceilings: Each Trade Contractor shall patch, repair, or rehang existing ceiling as necessary to provide an even plane surface of uniform appearance.

3.04 CLEANING

A. General:

1. Each Trade Contractor shall thoroughly clean areas and spaces where work is performed or used as access to work.
2. Each Trade Contractor shall completely remove paint, mortar, oils, putty, and items of similar nature.
3. Each Trade Contractor shall thoroughly clean piping, conduit, and similar features before applying paint or other finish.
4. Each Trade Contractor shall restore damaged pipe covering to its original condition.

END OF SECTION

## SECTION 01770

## CLOSEOUT PROCEDURES

## PART 1 GENERAL

## 1.01 SUMMARY

- A. This Section specifies administrative and procedural requirements for Project Closeout including, but not limited to:
1. Inspection procedures.
  2. Submittal of Project Record Documents.
  3. Submittal of Operating and Maintenance Manuals.
  4. Submittal of Warranties.
  5. Final cleaning.

## 1.02 SUBSTANTIAL COMPLETION

- A. Preliminary Procedures: Owner/Contractor will request inspection for certification of Substantial Completion, after completing following.
1. List exceptions in request.
  2. Show 100 percent Completion for portion of work claimed as Substantially Complete.
  3. Include supporting documentation for Substantial Completion as indicated in Contract Documents and statement showing accounting of changes to Contract Sum.
  4. If 100 percent Substantial Completion cannot be shown, include list of incomplete items, value of incomplete construction, and reason(s) work is not complete.
  5. Advise Owner of pending insurance changeover requirements.
  6. Submit specific warranties, workmanship bonds, release of liens from material suppliers or Trade Contractor as work progresses, maintenance agreements, final certifications, and similar documents.
  7. Obtain and submit releases enabling Owner unrestricted use of work and access to services and utilities; include occupancy permits, operating certificates, and similar releases.
  8. Submit Record Drawings, maintenance manuals, Damage or Settlement Survey, Property Survey, and similar final record information.
  9. Deliver tools, spare parts, extra stock, and similar items.
  10. Make final changeover of permanent locks and transmit keys to Owner.
  11. Advise Owner's personnel of changeover in security provisions.

12. Complete startup testing of systems, and instruction of Owner's operating and maintenance personnel.
13. Discontinue or changeover and remove temporary facilities from site, along with construction tools, mockups, and similar elements.
14. Complete final cleanup requirements, including touchup painting.
15. Touchup and otherwise repair and restore marred exposed finishes.

#### 1.04 RECORD DOCUMENT SUBMITTALS

##### A. General:

1. Do not use Record Documents for construction purposes; protect from deterioration and loss in secure, fire-resistive location.
2. Provide access to Record Documents for Architect's reference during normal working hours.

##### B. Record Drawings:

1. Maintain clean, undamaged set of blue- or black-line white-prints of Contract Drawings and Shop Drawings, especially for plumbing, fire protection, HVAC, and electrical work.
2. Mark set to show actual installation where installation varies substantially from work as originally shown.
3. Mark whichever drawing is most capable of showing conditions fully and accurately.
4. Where shop drawings are used, record cross-reference at corresponding location on Contract Drawings.
5. Give particular attention to concealed elements that would be difficult to measure and record at later date.
6. Mark Record Sets with red erasable pencil; use other colors to distinguish between variations in separate categories of work.
7. Mark new information that is important to Owner, but was not shown on Contract Drawings or Shop Drawings.
8. Note related Change Order numbers where applicable.
9. Organize Record Drawing Sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates, and other identification on cover of each set.

##### C. Record Specifications:

1. Maintain one complete copy of Project Manual, including Addenda, and one copy of other written Construction Documents, such as Change Orders and Modifications issued in printed form during construction.
2. Mark these Documents to show substantial variations in actual work performed in comparison with text of Specifications and

- Modifications.
3. Give particular attention to substitutions, selection of options, and similar information on elements that are concealed or cannot otherwise be readily discerned later by direct observation.
  4. Note related Record Drawing information and Product Data.
  5. On completion of work, submit Record Specifications to Architect for Owner's records.
- D. Record Product Data:
1. Maintain one copy of each product data submittal.
  2. Mark these documents to show significant variations in actual work performed in comparison with information submitted.
  3. Include variations in products delivered to site and from manufacturer's installation instructions and recommendations.
  4. Give particular attention to concealed products and portions of work that cannot otherwise be readily discerned later by direct observation.
  5. Note related Change Orders and mark-up of Record Drawings and Specifications.
  6. On completion of mark-up, submit complete set of Record Product Data to Architect for Owner's records.
- E. Record Sample Submittal:
1. Immediately before Substantial Completion date or dates, meet with Architect and Owner's personnel at site to determine which of submitted Samples that have been maintained during progress of work are to be transmitted to Owner for record purposes.
  2. Comply with delivery to Owner's sample storage area.
- F. Miscellaneous Record Submittals:
1. Refer to other Specification Sections for requirements of miscellaneous recordkeeping and submittals in connection with actual performance of work.
  2. Immediately before Substantial Completion date or dates, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference.
  3. Submit to Architect for Owner's records.
- G. Maintenance Manuals:
1. Organize operating and maintenance data into suitable sets of manageable size.
  2. Bind properly indexed data in individual heavy-duty 2 in., 3-ring vinyl-covered binders, with pocket folders for folded sheet information.
  3. Mark appropriate identification on front and spine of each binder.



4. Include following type of information:
  - a. Emergency instructions.
  - b. Spare parts list.
  - c. Copies of warranties.
  - d. Wiring diagrams.
  - e. Recommended turn-around cycles.
  - f. Inspection procedures.
  - g. Shop drawings and product data.
  - h. Fixture lamping schedule.

## PART 2 PRODUCTS

NOT USED

## PART 3 EXECUTION

### 3.01 CLOSEOUT PROCEDURES

- A. Operating and Maintenance Instructions:
  1. Arrange for each installer of equipment that requires regular maintenance to meet with Owner's personnel to provide instruction in proper operation and maintenance.
  2. If installers are not experienced in procedures, provide instruction by manufacturer's representatives; complete with step-by-step operating manuals written for each operating sequence or combination of sequences.
  3. Include detailed review of following items:
    - a. Maintenance manuals, complete with step-by-step instructions for maintenance and troubleshooting.
    - b. Record documents.
    - c. Spare parts and materials.
    - d. Tools.
    - e. Lubricants.
    - f. Fuels.
    - g. Identification systems.
    - h. Control sequences.
    - i. Hazards.
    - j. Cleaning.
    - k. Warranties and bonds.
    - l. Maintenance agreements and similar continuing commitments.

END OF SECTION