



**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

VOLUME I

JRA Commission Number – 25871



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APRIL 3, 2026**

SECTION 000700 - GENERAL CONDITIONS

The "General Conditions of the Contract for Construction", The American Institute of Architects' (AIA) Document A201-2017, forty-one (41) pages, is included herein.

END OF SECTION 000700

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AIA[®] Document A201[™] – 2017

General Conditions of the Contract for Construction

for the following PROJECT:
(Name and location or address)

THE OWNER:
(Name, legal status and address)

THE ARCHITECT:
(Name, legal status and address)

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ADDITIONS AND DELETIONS:

The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed. A vertical line in the left margin of this document indicates where the author has added necessary information and where the author has added to or deleted from the original AIA text.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

For guidance in modifying this document to include supplementary conditions, see AIA Document A503[™], Guide for Supplementary Conditions.

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ARTICLE 1 GENERAL PROVISIONS

§ 1.1 Basic Definitions

§ 1.1.1 The Contract Documents

The Contract Documents are enumerated in the Agreement between the Owner and Contractor (hereinafter the Agreement) and consist of the Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of the Contract, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is (1) a written amendment to the Contract signed by both parties, (2) a Change Order, (3) a Construction Change Directive, or (4) a written order for a minor change in the Work issued by the Architect. Unless specifically enumerated in the Agreement, the Contract Documents do not include the advertisement or invitation to bid, Instructions to Bidders, sample forms, other information furnished by the Owner in anticipation of receiving bids or proposals, the Contractor's bid or proposal, or portions of Addenda relating to bidding or proposal requirements.

§ 1.1.2 The Contract

The Contract Documents form the Contract for Construction. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind (1) between the Contractor and the Architect or the Architect's consultants, (2) between the Owner and a Subcontractor or a Sub-subcontractor, (3) between the Owner and the Architect or the Architect's consultants, or (4) between any persons or entities other than the Owner and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

§ 1.1.3 The Work

The term "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment, and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

§ 1.1.4 The Project

The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner and by Separate Contractors.

§ 1.1.5 The Drawings

The Drawings are the graphic and pictorial portions of the Contract Documents showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, schedules, and diagrams.

§ 1.1.6 The Specifications

The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, systems, standards and workmanship for the Work, and performance of related services.

§ 1.1.7 Instruments of Service

Instruments of Service are representations, in any medium of expression now known or later developed, of the tangible and intangible creative work performed by the Architect and the Architect's consultants under their respective professional services agreements. Instruments of Service may include, without limitation, studies, surveys, models, sketches, drawings, specifications, and other similar materials.

§ 1.1.8 Initial Decision Maker

The Initial Decision Maker is the person identified in the Agreement to render initial decisions on Claims in accordance with Section 15.2. The Initial Decision Maker shall not show partiality to the Owner or Contractor and shall not be liable for results of interpretations or decisions rendered in good faith.

§ 1.2 Correlation and Intent of the Contract Documents

§ 1.2.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor shall be required only to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

§ 1.2.1.1 The invalidity of any provision of the Contract Documents shall not invalidate the Contract or its remaining provisions. If it is determined that any provision of the Contract Documents violates any law, or is otherwise invalid or unenforceable, then that provision shall be revised to the extent necessary to make that provision legal and enforceable. In such case the Contract Documents shall be construed, to the fullest extent permitted by law, to give effect to the parties' intentions and purposes in executing the Contract.

§ 1.2.2 Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade.

§ 1.2.3 Unless otherwise stated in the Contract Documents, words that have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

§ 1.3 Capitalization

Terms capitalized in these General Conditions include those that are (1) specifically defined, (2) the titles of numbered articles, or (3) the titles of other documents published by the American Institute of Architects.

§ 1.4 Interpretation

In the interest of brevity the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

§ 1.5 Ownership and Use of Drawings, Specifications, and Other Instruments of Service

§ 1.5.1 The Architect and the Architect's consultants shall be deemed the authors and owners of their respective Instruments of Service, including the Drawings and Specifications, and retain all common law, statutory, and other reserved rights in their Instruments of Service, including copyrights. The Contractor, Subcontractors, Sub-subcontractors, and suppliers shall not own or claim a copyright in the Instruments of Service. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with the Project is not to be construed as publication in derogation of the Architect's or Architect's consultants' reserved rights.

§ 1.5.2 The Contractor, Subcontractors, Sub-subcontractors, and suppliers are authorized to use and reproduce the Instruments of Service provided to them, subject to any protocols established pursuant to Sections 1.7 and 1.8, solely and exclusively for execution of the Work. All copies made under this authorization shall bear the copyright notice, if any, shown on the Instruments of Service. The Contractor, Subcontractors, Sub-subcontractors, and suppliers may not use the Instruments of Service on other projects or for additions to the Project outside the scope of the Work without the specific written consent of the Owner, Architect, and the Architect's consultants.

§ 1.6 Notice

§ 1.6.1 Except as otherwise provided in Section 1.6.2, where the Contract Documents require one party to notify or give notice to the other party, such notice shall be provided in writing to the designated representative of the party to whom the notice is addressed and shall be deemed to have been duly served if delivered in person, by mail, by courier, or by electronic transmission if a method for electronic transmission is set forth in the Agreement.

§ 1.6.2 Notice of Claims as provided in Section 15.1.3 shall be provided in writing and shall be deemed to have been duly served only if delivered to the designated representative of the party to whom the notice is addressed by certified or registered mail, or by courier providing proof of delivery.

§ 1.7 Digital Data Use and Transmission

The parties shall agree upon protocols governing the transmission and use of Instruments of Service or any other information or documentation in digital form. The parties will use AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, to establish the protocols for the development, use, transmission, and exchange of digital data.

§ 1.8 Building Information Models Use and Reliance

Any use of, or reliance on, all or a portion of a building information model without agreement to protocols governing the use of, and reliance on, the information contained in the model and without having those protocols set forth in AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, and the requisite AIA Document

G202™–2013, Project Building Information Modeling Protocol Form, shall be at the using or relying party's sole risk and without liability to the other party and its contractors or consultants, the authors of, or contributors to, the building information model, and each of their agents and employees.

ARTICLE 2 OWNER

§ 2.1 General

§ 2.1.1 The Owner is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Owner shall designate in writing a representative who shall have express authority to bind the Owner with respect to all matters requiring the Owner's approval or authorization. Except as otherwise provided in Section 4.2.1, the Architect does not have such authority. The term "Owner" means the Owner or the Owner's authorized representative.

§ 2.1.2 The Owner shall furnish to the Contractor, within fifteen days after receipt of a written request, information necessary and relevant for the Contractor to evaluate, give notice of, or enforce mechanic's lien rights. Such information shall include a correct statement of the record legal title to the property on which the Project is located, usually referred to as the site, and the Owner's interest therein.

§ 2.2 Evidence of the Owner's Financial Arrangements

§ 2.2.1 Prior to commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract. The Contractor shall have no obligation to commence the Work until the Owner provides such evidence. If commencement of the Work is delayed under this Section 2.2.1, the Contract Time shall be extended appropriately.

§ 2.2.2 Following commencement of the Work and upon written request by the Contractor, the Owner shall furnish to the Contractor reasonable evidence that the Owner has made financial arrangements to fulfill the Owner's obligations under the Contract only if (1) the Owner fails to make payments to the Contractor as the Contract Documents require; (2) the Contractor identifies in writing a reasonable concern regarding the Owner's ability to make payment when due; or (3) a change in the Work materially changes the Contract Sum. If the Owner fails to provide such evidence, as required, within fourteen days of the Contractor's request, the Contractor may immediately stop the Work and, in that event, shall notify the Owner that the Work has stopped. However, if the request is made because a change in the Work materially changes the Contract Sum under (3) above, the Contractor may immediately stop only that portion of the Work affected by the change until reasonable evidence is provided. If the Work is stopped under this Section 2.2.2, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided in the Contract Documents.

§ 2.2.3 After the Owner furnishes evidence of financial arrangements under this Section 2.2, the Owner shall not materially vary such financial arrangements without prior notice to the Contractor.

§ 2.2.4 Where the Owner has designated information furnished under this Section 2.2 as "confidential," the Contractor shall keep the information confidential and shall not disclose it to any other person. However, the Contractor may disclose "confidential" information, after seven (7) days' notice to the Owner, where disclosure is required by law, including a subpoena or other form of compulsory legal process issued by a court or governmental entity, or by court or arbitrator(s) order. The Contractor may also disclose "confidential" information to its employees, consultants, sureties, Subcontractors and their employees, Sub-subcontractors, and others who need to know the content of such information solely and exclusively for the Project and who agree to maintain the confidentiality of such information.

§ 2.3 Information and Services Required of the Owner

§ 2.3.1 Except for permits and fees that are the responsibility of the Contractor under the Contract Documents, including those required under Section 3.7.1, the Owner shall secure and pay for necessary approvals, easements, assessments and charges required for construction, use or occupancy of permanent structures or for permanent changes in existing facilities.

§ 2.3.2 The Owner shall retain an architect lawfully licensed to practice architecture, or an entity lawfully practicing architecture, in the jurisdiction where the Project is located. That person or entity is identified as the Architect in the Agreement and is referred to throughout the Contract Documents as if singular in number.

§ 2.3.3 If the employment of the Architect terminates, the Owner shall employ a successor to whom the Contractor has no reasonable objection and whose status under the Contract Documents shall be that of the Architect.

§ 2.3.4 The Owner shall furnish surveys describing physical characteristics, legal limitations and utility locations for the site of the Project, and a legal description of the site. The Contractor shall be entitled to rely on the accuracy of information furnished by the Owner but shall exercise proper precautions relating to the safe performance of the Work.

§ 2.3.5 The Owner shall furnish information or services required of the Owner by the Contract Documents with reasonable promptness. The Owner shall also furnish any other information or services under the Owner's control and relevant to the Contractor's performance of the Work with reasonable promptness after receiving the Contractor's written request for such information or services.

§ 2.3.6 Unless otherwise provided in the Contract Documents, the Owner shall furnish to the Contractor one copy of the Contract Documents for purposes of making reproductions pursuant to Section 1.5.2.

§ 2.4 Owner's Right to Stop the Work

If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents as required by Section 12.2 or repeatedly fails to carry out Work in accordance with the Contract Documents, the Owner may issue a written order to the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, the right of the Owner to stop the Work shall not give rise to a duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other person or entity, except to the extent required by Section 6.1.3.

§ 2.5 Owner's Right to Carry Out the Work

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a ten-day period after receipt of notice from the Owner to commence and continue correction of such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies the Owner may have, correct such default or neglect. Such action by the Owner and amounts charged to the Contractor are both subject to prior approval of the Architect and the Architect may, pursuant to Section 9.5.1, withhold or nullify a Certificate for Payment in whole or in part, to the extent reasonably necessary to reimburse the Owner for the reasonable cost of correcting such deficiencies, including Owner's expenses and compensation for the Architect's additional services made necessary by such default, neglect, or failure. If current and future payments are not sufficient to cover such amounts, the Contractor shall pay the difference to the Owner. If the Contractor disagrees with the actions of the Owner or the Architect, or the amounts claimed as costs to the Owner, the Contractor may file a Claim pursuant to Article 15.

ARTICLE 3 CONTRACTOR

§ 3.1 General

§ 3.1.1 The Contractor is the person or entity identified as such in the Agreement and is referred to throughout the Contract Documents as if singular in number. The Contractor shall be lawfully licensed, if required in the jurisdiction where the Project is located. The Contractor shall designate in writing a representative who shall have express authority to bind the Contractor with respect to all matters under this Contract. The term "Contractor" means the Contractor or the Contractor's authorized representative.

§ 3.1.2 The Contractor shall perform the Work in accordance with the Contract Documents.

§ 3.1.3 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract, or by tests, inspections or approvals required or performed by persons or entities other than the Contractor.

§ 3.2 Review of Contract Documents and Field Conditions by Contractor

§ 3.2.1 Execution of the Contract by the Contractor is a representation that the Contractor has visited the site, become generally familiar with local conditions under which the Work is to be performed, and correlated personal observations with requirements of the Contract Documents.

§ 3.2.2 Because the Contract Documents are complementary, the Contractor shall, before starting each portion of the Work, carefully study and compare the various Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner pursuant to Section 2.3.4, shall take field measurements of any existing conditions related to that portion of the Work, and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating coordination and construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, the Contractor shall promptly report to the Architect any errors, inconsistencies or omissions discovered by or made known to the Contractor as a request for information in such form as the Architect may require. It is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional, unless otherwise specifically provided in the Contract Documents.

§ 3.2.3 The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, but the Contractor shall promptly report to the Architect any nonconformity discovered by or made known to the Contractor as a request for information in such form as the Architect may require.

§ 3.2.4 If the Contractor believes that additional cost or time is involved because of clarifications or instructions the Architect issues in response to the Contractor's notices or requests for information pursuant to Sections 3.2.2 or 3.2.3, the Contractor shall submit Claims as provided in Article 15. If the Contractor fails to perform the obligations of Sections 3.2.2 or 3.2.3, the Contractor shall pay such costs and damages to the Owner, subject to Section 15.1.7, as would have been avoided if the Contractor had performed such obligations. If the Contractor performs those obligations, the Contractor shall not be liable to the Owner or Architect for damages resulting from errors, inconsistencies or omissions in the Contract Documents, for differences between field measurements or conditions and the Contract Documents, or for nonconformities of the Contract Documents to applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities.

§ 3.3 Supervision and Construction Procedures

§ 3.3.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and have control over, construction means, methods, techniques, sequences, and procedures, and for coordinating all portions of the Work under the Contract. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences, or procedures, the Contractor shall evaluate the jobsite safety thereof and shall be solely responsible for the jobsite safety of such means, methods, techniques, sequences, or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely notice to the Owner and Architect, and shall propose alternative means, methods, techniques, sequences, or procedures. The Architect shall evaluate the proposed alternative solely for conformance with the design intent for the completed construction. Unless the Architect objects to the Contractor's proposed alternative, the Contractor shall perform the Work using its alternative means, methods, techniques, sequences, or procedures.

§ 3.3.2 The Contractor shall be responsible to the Owner for acts and omissions of the Contractor's employees, Subcontractors and their agents and employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors.

§ 3.3.3 The Contractor shall be responsible for inspection of portions of Work already performed to determine that such portions are in proper condition to receive subsequent Work.

§ 3.4 Labor and Materials

§ 3.4.1 Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

§ 3.4.2 Except in the case of minor changes in the Work approved by the Architect in accordance with Section 3.12.8 or ordered by the Architect in accordance with Section 7.4, the Contractor may make substitutions only with the consent of the Owner, after evaluation by the Architect and in accordance with a Change Order or Construction Change Directive.

§ 3.4.3 The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not properly skilled in tasks assigned to them.

§ 3.5 Warranty

§ 3.5.1 The Contractor warrants to the Owner and Architect that materials and equipment furnished under the Contract will be of good quality and new unless the Contract Documents require or permit otherwise. The Contractor further warrants that the Work will conform to the requirements of the Contract Documents and will be free from defects, except for those inherent in the quality of the Work the Contract Documents require or permit. Work, materials, or equipment not conforming to these requirements may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, alterations to the Work not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage. If required by the Architect, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment.

§ 3.5.2 All material, equipment, or other special warranties required by the Contract Documents shall be issued in the name of the Owner, or shall be transferable to the Owner, and shall commence in accordance with Section 9.8.4.

§ 3.6 Taxes

The Contractor shall pay sales, consumer, use and similar taxes for the Work provided by the Contractor that are legally enacted when bids are received or negotiations concluded, whether or not yet effective or merely scheduled to go into effect.

§ 3.7 Permits, Fees, Notices and Compliance with Laws

§ 3.7.1 Unless otherwise provided in the Contract Documents, the Contractor shall secure and pay for the building permit as well as for other permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work that are customarily secured after execution of the Contract and legally required at the time bids are received or negotiations concluded.

§ 3.7.2 The Contractor shall comply with and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities applicable to performance of the Work.

§ 3.7.3 If the Contractor performs Work knowing it to be contrary to applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of public authorities, the Contractor shall assume appropriate responsibility for such Work and shall bear the costs attributable to correction.

§ 3.7.4 Concealed or Unknown Conditions

If the Contractor encounters conditions at the site that are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall promptly provide notice to the Owner and the Architect before conditions are disturbed and in no event later than 14 days after first observance of the conditions. The Architect will promptly investigate such conditions and, if the Architect determines that they differ materially and cause an increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, will recommend that an equitable adjustment be made in the Contract Sum or Contract Time, or both. If the Architect determines that the conditions at the site are not materially different from those indicated in the Contract Documents and that no change in the terms of the Contract is justified, the Architect shall promptly notify the Owner and Contractor, stating the reasons. If either party disputes the Architect's determination or recommendation, that party may submit a Claim as provided in Article 15.

§ 3.7.5 If, in the course of the Work, the Contractor encounters human remains or recognizes the existence of burial markers, archaeological sites or wetlands not indicated in the Contract Documents, the Contractor shall immediately suspend any operations that would affect them and shall notify the Owner and Architect. Upon receipt of such notice, the Owner shall promptly take any action necessary to obtain governmental authorization required to resume the operations. The Contractor shall continue to suspend such operations until otherwise instructed by the Owner but shall continue with all other operations that do not affect those remains or features. Requests for adjustments in the Contract Sum and Contract Time arising from the existence of such remains or features may be made as provided in Article 15.

§ 3.8 Allowances

§ 3.8.1 The Contractor shall include in the Contract Sum all allowances stated in the Contract Documents. Items covered by allowances shall be supplied for such amounts and by such persons or entities as the Owner may direct, but the Contractor shall not be required to employ persons or entities to whom the Contractor has reasonable objection.

§ 3.8.2 Unless otherwise provided in the Contract Documents,

- .1 allowances shall cover the cost to the Contractor of materials and equipment delivered at the site and all required taxes, less applicable trade discounts;
- .2 Contractor's costs for unloading and handling at the site, labor, installation costs, overhead, profit, and other expenses contemplated for stated allowance amounts shall be included in the Contract Sum but not in the allowances; and
- .3 whenever costs are more than or less than allowances, the Contract Sum shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (1) the difference between actual costs and the allowances under Section 3.8.2.1 and (2) changes in Contractor's costs under Section 3.8.2.2.

§ 3.8.3 Materials and equipment under an allowance shall be selected by the Owner with reasonable promptness.

§ 3.9 Superintendent

§ 3.9.1 The Contractor shall employ a competent superintendent and necessary assistants who shall be in attendance at the Project site during performance of the Work. The superintendent shall represent the Contractor, and communications given to the superintendent shall be as binding as if given to the Contractor.

§ 3.9.2 The Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the name and qualifications of a proposed superintendent. Within 14 days of receipt of the information, the Architect may notify the Contractor, stating whether the Owner or the Architect (1) has reasonable objection to the proposed superintendent or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 3.9.3 The Contractor shall not employ a proposed superintendent to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not change the superintendent without the Owner's consent, which shall not unreasonably be withheld or delayed.

§ 3.10 Contractor's Construction and Submittal Schedules

§ 3.10.1 The Contractor, promptly after being awarded the Contract, shall submit for the Owner's and Architect's information a Contractor's construction schedule for the Work. The schedule shall contain detail appropriate for the Project, including (1) the date of commencement of the Work, interim schedule milestone dates, and the date of Substantial Completion; (2) an apportionment of the Work by construction activity; and (3) the time required for completion of each portion of the Work. The schedule shall provide for the orderly progression of the Work to completion and shall not exceed time limits current under the Contract Documents. The schedule shall be revised at appropriate intervals as required by the conditions of the Work and Project.

§ 3.10.2 The Contractor, promptly after being awarded the Contract and thereafter as necessary to maintain a current submittal schedule, shall submit a submittal schedule for the Architect's approval. The Architect's approval shall not be unreasonably delayed or withheld. The submittal schedule shall (1) be coordinated with the Contractor's construction schedule, and (2) allow the Architect reasonable time to review submittals. If the Contractor fails to submit a submittal schedule, or fails to provide submittals in accordance with the approved submittal schedule, the Contractor shall not be entitled to any increase in Contract Sum or extension of Contract Time based on the time required for review of submittals.

§ 3.10.3 The Contractor shall perform the Work in general accordance with the most recent schedules submitted to the Owner and Architect.

§ 3.11 Documents and Samples at the Site

The Contractor shall make available, at the Project site, the Contract Documents, including Change Orders, Construction Change Directives, and other Modifications, in good order and marked currently to indicate field changes and selections made during construction, and the approved Shop Drawings, Product Data, Samples, and similar required submittals. These shall be in electronic form or paper copy, available to the Architect and Owner, and

delivered to the Architect for submittal to the Owner upon completion of the Work as a record of the Work as constructed.

§ 3.12 Shop Drawings, Product Data and Samples

§ 3.12.1 Shop Drawings are drawings, diagrams, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate some portion of the Work.

§ 3.12.2 Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

§ 3.12.3 Samples are physical examples that illustrate materials, equipment, or workmanship, and establish standards by which the Work will be judged.

§ 3.12.4 Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. Their purpose is to demonstrate how the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents for those portions of the Work for which the Contract Documents require submittals. Review by the Architect is subject to the limitations of Section 4.2.7. Informational submittals upon which the Architect is not expected to take responsive action may be so identified in the Contract Documents. Submittals that are not required by the Contract Documents may be returned by the Architect without action.

§ 3.12.5 The Contractor shall review for compliance with the Contract Documents, approve, and submit to the Architect, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents, in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of Separate Contractors.

§ 3.12.6 By submitting Shop Drawings, Product Data, Samples, and similar submittals, the Contractor represents to the Owner and Architect that the Contractor has (1) reviewed and approved them, (2) determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and (3) checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

§ 3.12.7 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples, or similar submittals, until the respective submittal has been approved by the Architect.

§ 3.12.8 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from the requirements of the Contract Documents by the Architect's approval of Shop Drawings, Product Data, Samples, or similar submittals, unless the Contractor has specifically notified the Architect of such deviation at the time of submittal and (1) the Architect has given written approval to the specific deviation as a minor change in the Work, or (2) a Change Order or Construction Change Directive has been issued authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals, by the Architect's approval thereof.

§ 3.12.9 The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples, or similar submittals, to revisions other than those requested by the Architect on previous submittals. In the absence of such notice, the Architect's approval of a resubmission shall not apply to such revisions.

§ 3.12.10 The Contractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Contract Documents for a portion of the Work or unless the Contractor needs to provide such services in order to carry out the Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures. The Contractor shall not be required to provide professional services in violation of applicable law.

§ 3.12.10.1 If professional design services or certifications by a design professional related to systems, materials, or equipment are specifically required of the Contractor by the Contract Documents, the Owner and the Architect will specify all performance and design criteria that such services must satisfy. The Contractor shall be entitled to rely

upon the adequacy and accuracy of the performance and design criteria provided in the Contract Documents. The Contractor shall cause such services or certifications to be provided by an appropriately licensed design professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings, and other submittals prepared by such professional. Shop Drawings, and other submittals related to the Work, designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to the Architect. The Owner and the Architect shall be entitled to rely upon the adequacy and accuracy of the services, certifications, and approvals performed or provided by such design professionals, provided the Owner and Architect have specified to the Contractor the performance and design criteria that such services must satisfy. Pursuant to this Section 3.12.10, the Architect will review and approve or take other appropriate action on submittals only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents.

§ 3.12.10.2 If the Contract Documents require the Contractor's design professional to certify that the Work has been performed in accordance with the design criteria, the Contractor shall furnish such certifications to the Architect at the time and in the form specified by the Architect.

§ 3.13 Use of Site

The Contractor shall confine operations at the site to areas permitted by applicable laws, statutes, ordinances, codes, rules and regulations, lawful orders of public authorities, and the Contract Documents and shall not unreasonably encumber the site with materials or equipment.

§ 3.14 Cutting and Patching

§ 3.14.1 The Contractor shall be responsible for cutting, fitting, or patching required to complete the Work or to make its parts fit together properly. All areas requiring cutting, fitting, or patching shall be restored to the condition existing prior to the cutting, fitting, or patching, unless otherwise required by the Contract Documents.

§ 3.14.2 The Contractor shall not damage or endanger a portion of the Work or fully or partially completed construction of the Owner or Separate Contractors by cutting, patching, or otherwise altering such construction, or by excavation. The Contractor shall not cut or otherwise alter construction by the Owner or a Separate Contractor except with written consent of the Owner and of the Separate Contractor. Consent shall not be unreasonably withheld. The Contractor shall not unreasonably withhold, from the Owner or a Separate Contractor, its consent to cutting or otherwise altering the Work.

§ 3.15 Cleaning Up

§ 3.15.1 The Contractor shall keep the premises and surrounding area free from accumulation of waste materials and rubbish caused by operations under the Contract. At completion of the Work, the Contractor shall remove waste materials, rubbish, the Contractor's tools, construction equipment, machinery, and surplus materials from and about the Project.

§ 3.15.2 If the Contractor fails to clean up as provided in the Contract Documents, the Owner may do so and the Owner shall be entitled to reimbursement from the Contractor.

§ 3.16 Access to Work

The Contractor shall provide the Owner and Architect with access to the Work in preparation and progress wherever located.

§ 3.17 Royalties, Patents and Copyrights

The Contractor shall pay all royalties and license fees. The Contractor shall defend suits or claims for infringement of copyrights and patent rights and shall hold the Owner and Architect harmless from loss on account thereof, but shall not be responsible for defense or loss when a particular design, process, or product of a particular manufacturer or manufacturers is required by the Contract Documents, or where the copyright violations are contained in Drawings, Specifications, or other documents prepared by the Owner or Architect. However, if an infringement of a copyright or patent is discovered by, or made known to, the Contractor, the Contractor shall be responsible for the loss unless the information is promptly furnished to the Architect.

§ 3.18 Indemnification

§ 3.18.1 To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), but only to the extent caused by the negligent acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity that would otherwise exist as to a party or person described in this Section 3.18.

§ 3.18.2 In claims against any person or entity indemnified under this Section 3.18 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under Section 3.18.1 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

ARTICLE 4 ARCHITECT

§ 4.1 General

§ 4.1.1 The Architect is the person or entity retained by the Owner pursuant to Section 2.3.2 and identified as such in the Agreement.

§ 4.1.2 Duties, responsibilities, and limitations of authority of the Architect as set forth in the Contract Documents shall not be restricted, modified, or extended without written consent of the Owner, Contractor, and Architect. Consent shall not be unreasonably withheld.

§ 4.2 Administration of the Contract

§ 4.2.1 The Architect will provide administration of the Contract as described in the Contract Documents and will be an Owner's representative during construction until the date the Architect issues the final Certificate for Payment. The Architect will have authority to act on behalf of the Owner only to the extent provided in the Contract Documents.

§ 4.2.2 The Architect will visit the site at intervals appropriate to the stage of construction, or as otherwise agreed with the Owner, to become generally familiar with the progress and quality of the portion of the Work completed, and to determine in general if the Work observed is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Architect will not have control over, charge of, or responsibility for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work, since these are solely the Contractor's rights and responsibilities under the Contract Documents.

§ 4.2.3 On the basis of the site visits, the Architect will keep the Owner reasonably informed about the progress and quality of the portion of the Work completed, and promptly report to the Owner (1) known deviations from the Contract Documents, (2) known deviations from the most recent construction schedule submitted by the Contractor, and (3) defects and deficiencies observed in the Work. The Architect will not be responsible for the Contractor's failure to perform the Work in accordance with the requirements of the Contract Documents. The Architect will not have control over or charge of, and will not be responsible for acts or omissions of, the Contractor, Subcontractors, or their agents or employees, or any other persons or entities performing portions of the Work.

§ 4.2.4 Communications

The Owner and Contractor shall include the Architect in all communications that relate to or affect the Architect's services or professional responsibilities. The Owner shall promptly notify the Architect of the substance of any direct communications between the Owner and the Contractor otherwise relating to the Project. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and suppliers shall be through the Contractor. Communications by and with Separate Contractors shall be through the Owner. The Contract Documents may specify other communication protocols.

§ 4.2.5 Based on the Architect's evaluations of the Contractor's Applications for Payment, the Architect will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

§ 4.2.6 The Architect has authority to reject Work that does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable, the Architect will have authority to require inspection or testing of the Work in accordance with Sections 13.4.2 and 13.4.3, whether or not the Work is fabricated, installed or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, suppliers, their agents or employees, or other persons or entities performing portions of the Work.

§ 4.2.7 The Architect will review and approve, or take other appropriate action upon, the Contractor's submittals such as Shop Drawings, Product Data, and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. The Architect's action will be taken in accordance with the submittal schedule approved by the Architect or, in the absence of an approved submittal schedule, with reasonable promptness while allowing sufficient time in the Architect's professional judgment to permit adequate review. Review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect's review of the Contractor's submittals shall not relieve the Contractor of the obligations under Sections 3.3, 3.5, and 3.12. The Architect's review shall not constitute approval of safety precautions or of any construction means, methods, techniques, sequences, or procedures. The Architect's approval of a specific item shall not indicate approval of an assembly of which the item is a component.

§ 4.2.8 The Architect will prepare Change Orders and Construction Change Directives, and may order minor changes in the Work as provided in Section 7.4. The Architect will investigate and make determinations and recommendations regarding concealed and unknown conditions as provided in Section 3.7.4.

§ 4.2.9 The Architect will conduct inspections to determine the date or dates of Substantial Completion and the date of final completion; issue Certificates of Substantial Completion pursuant to Section 9.8; receive and forward to the Owner, for the Owner's review and records, written warranties and related documents required by the Contract and assembled by the Contractor pursuant to Section 9.10; and issue a final Certificate for Payment pursuant to Section 9.10.

§ 4.2.10 If the Owner and Architect agree, the Architect will provide one or more Project representatives to assist in carrying out the Architect's responsibilities at the site. The Owner shall notify the Contractor of any change in the duties, responsibilities and limitations of authority of the Project representatives.

§ 4.2.11 The Architect will interpret and decide matters concerning performance under, and requirements of, the Contract Documents on written request of either the Owner or Contractor. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness.

§ 4.2.12 Interpretations and decisions of the Architect will be consistent with the intent of, and reasonably inferable from, the Contract Documents and will be in writing or in the form of drawings. When making such interpretations and decisions, the Architect will endeavor to secure faithful performance by both Owner and Contractor, will not show partiality to either, and will not be liable for results of interpretations or decisions rendered in good faith.

§ 4.2.13 The Architect's decisions on matters relating to aesthetic effect will be final if consistent with the intent expressed in the Contract Documents.

§ 4.2.14 The Architect will review and respond to requests for information about the Contract Documents. The Architect's response to such requests will be made in writing within any time limits agreed upon or otherwise with reasonable promptness. If appropriate, the Architect will prepare and issue supplemental Drawings and Specifications in response to the requests for information.

ARTICLE 5 SUBCONTRACTORS

§ 5.1 Definitions

§ 5.1.1 A Subcontractor is a person or entity who has a direct contract with the Contractor to perform a portion of the Work at the site. The term "Subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Subcontractor or an authorized representative of the Subcontractor. The term "Subcontractor" does not include a Separate Contractor or the subcontractors of a Separate Contractor.

§ 5.1.2 A Sub-subcontractor is a person or entity who has a direct or indirect contract with a Subcontractor to perform a portion of the Work at the site. The term "Sub-subcontractor" is referred to throughout the Contract Documents as if singular in number and means a Sub-subcontractor or an authorized representative of the Sub-subcontractor.

§ 5.2 Award of Subcontracts and Other Contracts for Portions of the Work

§ 5.2.1 Unless otherwise stated in the Contract Documents, the Contractor, as soon as practicable after award of the Contract, shall notify the Owner and Architect of the persons or entities proposed for each principal portion of the Work, including those who are to furnish materials or equipment fabricated to a special design. Within 14 days of receipt of the information, the Architect may notify the Contractor whether the Owner or the Architect (1) has reasonable objection to any such proposed person or entity or (2) requires additional time for review. Failure of the Architect to provide notice within the 14-day period shall constitute notice of no reasonable objection.

§ 5.2.2 The Contractor shall not contract with a proposed person or entity to whom the Owner or Architect has made reasonable and timely objection. The Contractor shall not be required to contract with anyone to whom the Contractor has made reasonable objection.

§ 5.2.3 If the Owner or Architect has reasonable objection to a person or entity proposed by the Contractor, the Contractor shall propose another to whom the Owner or Architect has no reasonable objection. If the proposed but rejected Subcontractor was reasonably capable of performing the Work, the Contract Sum and Contract Time shall be increased or decreased by the difference, if any, occasioned by such change, and an appropriate Change Order shall be issued before commencement of the substitute Subcontractor's Work. However, no increase in the Contract Sum or Contract Time shall be allowed for such change unless the Contractor has acted promptly and responsively in submitting names as required.

§ 5.2.4 The Contractor shall not substitute a Subcontractor, person, or entity for one previously selected if the Owner or Architect makes reasonable objection to such substitution.

§ 5.3 Subcontractual Relations

By appropriate written agreement, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the obligations and responsibilities, including the responsibility for safety of the Subcontractor's Work that the Contractor, by these Contract Documents, assumes toward the Owner and Architect. Each subcontract agreement shall preserve and protect the rights of the Owner and Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights, and shall allow to the Subcontractor, unless specifically provided otherwise in the subcontract agreement, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Owner. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound, and, upon written request of the Subcontractor, identify to the Subcontractor terms and conditions of the proposed subcontract agreement that may be at variance with the Contract Documents. Subcontractors will similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

§ 5.4 Contingent Assignment of Subcontracts

§ 5.4.1 Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that

- .1 assignment is effective only after termination of the Contract by the Owner for cause pursuant to Section 14.2 and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor; and
- .2 assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.

When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.

§ 5.4.2 Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.

§ 5.4.3 Upon assignment to the Owner under this Section 5.4, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

ARTICLE 6 CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS

§ 6.1 Owner's Right to Perform Construction and to Award Separate Contracts

§ 6.1.1 The term "Separate Contractor(s)" shall mean other contractors retained by the Owner under separate agreements. The Owner reserves the right to perform construction or operations related to the Project with the Owner's own forces, and with Separate Contractors retained under Conditions of the Contract substantially similar to those of this Contract, including those provisions of the Conditions of the Contract related to insurance and waiver of subrogation.

§ 6.1.2 When separate contracts are awarded for different portions of the Project or other construction or operations on the site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate Owner-Contractor Agreement.

§ 6.1.3 The Owner shall provide for coordination of the activities of the Owner's own forces and of each Separate Contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with any Separate Contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to its construction schedule deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, Separate Contractors, and the Owner until subsequently revised.

§ 6.1.4 Unless otherwise provided in the Contract Documents, when the Owner performs construction or operations related to the Project with the Owner's own forces or with Separate Contractors, the Owner or its Separate Contractors shall have the same obligations and rights that the Contractor has under the Conditions of the Contract, including, without excluding others, those stated in Article 3, this Article 6, and Articles 10, 11, and 12.

§ 6.2 Mutual Responsibility

§ 6.2.1 The Contractor shall afford the Owner and Separate Contractors reasonable opportunity for introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations with theirs as required by the Contract Documents.

§ 6.2.2 If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a Separate Contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly notify the Architect of apparent discrepancies or defects in the construction or operations by the Owner or Separate Contractor that would render it unsuitable for proper execution and results of the Contractor's Work. Failure of the Contractor to notify the Architect of apparent discrepancies or defects prior to proceeding with the Work shall constitute an acknowledgment that the Owner's or Separate Contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work. The Contractor shall not be responsible for discrepancies or defects in the construction or operations by the Owner or Separate Contractor that are not apparent.

§ 6.2.3 The Contractor shall reimburse the Owner for costs the Owner incurs that are payable to a Separate Contractor because of the Contractor's delays, improperly timed activities or defective construction. The Owner shall be responsible to the Contractor for costs the Contractor incurs because of a Separate Contractor's delays, improperly timed activities, damage to the Work or defective construction.

§ 6.2.4 The Contractor shall promptly remedy damage that the Contractor wrongfully causes to completed or partially completed construction or to property of the Owner or Separate Contractor as provided in Section 10.2.5.

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§ 6.2.5 The Owner and each Separate Contractor shall have the same responsibilities for cutting and patching as are described for the Contractor in Section 3.14.

§ 6.3 Owner's Right to Clean Up

If a dispute arises among the Contractor, Separate Contractors, and the Owner as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish, the Owner may clean up and the Architect will allocate the cost among those responsible.

ARTICLE 7 CHANGES IN THE WORK

§ 7.1 General

§ 7.1.1 Changes in the Work may be accomplished after execution of the Contract, and without invalidating the Contract, by Change Order, Construction Change Directive or order for a minor change in the Work, subject to the limitations stated in this Article 7 and elsewhere in the Contract Documents.

§ 7.1.2 A Change Order shall be based upon agreement among the Owner, Contractor, and Architect. A Construction Change Directive requires agreement by the Owner and Architect and may or may not be agreed to by the Contractor. An order for a minor change in the Work may be issued by the Architect alone.

§ 7.1.3 Changes in the Work shall be performed under applicable provisions of the Contract Documents. The Contractor shall proceed promptly with changes in the Work, unless otherwise provided in the Change Order, Construction Change Directive, or order for a minor change in the Work.

§ 7.2 Change Orders

§ 7.2.1 A Change Order is a written instrument prepared by the Architect and signed by the Owner, Contractor, and Architect stating their agreement upon all of the following:

- .1 The change in the Work;
- .2 The amount of the adjustment, if any, in the Contract Sum; and
- .3 The extent of the adjustment, if any, in the Contract Time.

§ 7.3 Construction Change Directives

§ 7.3.1 A Construction Change Directive is a written order prepared by the Architect and signed by the Owner and Architect, directing a change in the Work prior to agreement on adjustment, if any, in the Contract Sum or Contract Time, or both. The Owner may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions, the Contract Sum and Contract Time being adjusted accordingly.

§ 7.3.2 A Construction Change Directive shall be used in the absence of total agreement on the terms of a Change Order.

§ 7.3.3 If the Construction Change Directive provides for an adjustment to the Contract Sum, the adjustment shall be based on one of the following methods:

- .1 Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation;
- .2 Unit prices stated in the Contract Documents or subsequently agreed upon;
- .3 Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee; or
- .4 As provided in Section 7.3.4.

§ 7.3.4 If the Contractor does not respond promptly or disagrees with the method for adjustment in the Contract Sum, the Architect shall determine the adjustment on the basis of reasonable expenditures and savings of those performing the Work attributable to the change, including, in case of an increase in the Contract Sum, an amount for overhead and profit as set forth in the Agreement, or if no such amount is set forth in the Agreement, a reasonable amount. In such case, and also under Section 7.3.3.3, the Contractor shall keep and present, in such form as the Architect may prescribe, an itemized accounting together with appropriate supporting data. Unless otherwise provided in the Contract Documents, costs for the purposes of this Section 7.3.4 shall be limited to the following:

- .1 Costs of labor, including applicable payroll taxes, fringe benefits required by agreement or custom, workers' compensation insurance, and other employee costs approved by the Architect;
- .2 Costs of materials, supplies, and equipment, including cost of transportation, whether incorporated or consumed;
- .3 Rental costs of machinery and equipment, exclusive of hand tools, whether rented from the Contractor or others;
- .4 Costs of premiums for all bonds and insurance, permit fees, and sales, use, or similar taxes, directly related to the change; and
- .5 Costs of supervision and field office personnel directly attributable to the change.

§ 7.3.5 If the Contractor disagrees with the adjustment in the Contract Time, the Contractor may make a Claim in accordance with applicable provisions of Article 15.

§ 7.3.6 Upon receipt of a Construction Change Directive, the Contractor shall promptly proceed with the change in the Work involved and advise the Architect of the Contractor's agreement or disagreement with the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

§ 7.3.7 A Construction Change Directive signed by the Contractor indicates the Contractor's agreement therewith, including adjustment in Contract Sum and Contract Time or the method for determining them. Such agreement shall be effective immediately and shall be recorded as a Change Order.

§ 7.3.8 The amount of credit to be allowed by the Contractor to the Owner for a deletion or change that results in a net decrease in the Contract Sum shall be actual net cost as confirmed by the Architect. When both additions and credits covering related Work or substitutions are involved in a change, the allowance for overhead and profit shall be figured on the basis of net increase, if any, with respect to that change.

§ 7.3.9 Pending final determination of the total cost of a Construction Change Directive to the Owner, the Contractor may request payment for Work completed under the Construction Change Directive in Applications for Payment. The Architect will make an interim determination for purposes of monthly certification for payment for those costs and certify for payment the amount that the Architect determines, in the Architect's professional judgment, to be reasonably justified. The Architect's interim determination of cost shall adjust the Contract Sum on the same basis as a Change Order, subject to the right of either party to disagree and assert a Claim in accordance with Article 15.

§ 7.3.10 When the Owner and Contractor agree with a determination made by the Architect concerning the adjustments in the Contract Sum and Contract Time, or otherwise reach agreement upon the adjustments, such agreement shall be effective immediately and the Architect will prepare a Change Order. Change Orders may be issued for all or any part of a Construction Change Directive.

§ 7.4 Minor Changes in the Work

The Architect may order minor changes in the Work that are consistent with the intent of the Contract Documents and do not involve an adjustment in the Contract Sum or an extension of the Contract Time. The Architect's order for minor changes shall be in writing. If the Contractor believes that the proposed minor change in the Work will affect the Contract Sum or Contract Time, the Contractor shall notify the Architect and shall not proceed to implement the change in the Work. If the Contractor performs the Work set forth in the Architect's order for a minor change without prior notice to the Architect that such change will affect the Contract Sum or Contract Time, the Contractor waives any adjustment to the Contract Sum or extension of the Contract Time.

ARTICLE 8 TIME

§ 8.1 Definitions

§ 8.1.1 Unless otherwise provided, Contract Time is the period of time, including authorized adjustments, allotted in the Contract Documents for Substantial Completion of the Work.

§ 8.1.2 The date of commencement of the Work is the date established in the Agreement.

§ 8.1.3 The date of Substantial Completion is the date certified by the Architect in accordance with Section 9.8.

§ 8.1.4 The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

§ 8.2 Progress and Completion

§ 8.2.1 Time limits stated in the Contract Documents are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

§ 8.2.2 The Contractor shall not knowingly, except by agreement or instruction of the Owner in writing, commence the Work prior to the effective date of insurance required to be furnished by the Contractor and Owner.

§ 8.2.3 The Contractor shall proceed expeditiously with adequate forces and shall achieve Substantial Completion within the Contract Time.

§ 8.3 Delays and Extensions of Time

§ 8.3.1 If the Contractor is delayed at any time in the commencement or progress of the Work by (1) an act or neglect of the Owner or Architect, of an employee of either, or of a Separate Contractor; (2) by changes ordered in the Work; (3) by labor disputes, fire, unusual delay in deliveries, unavoidable casualties, adverse weather conditions documented in accordance with Section 15.1.6.2, or other causes beyond the Contractor's control; (4) by delay authorized by the Owner pending mediation and binding dispute resolution; or (5) by other causes that the Contractor asserts, and the Architect determines, justify delay, then the Contract Time shall be extended for such reasonable time as the Architect may determine.

§ 8.3.2 Claims relating to time shall be made in accordance with applicable provisions of Article 15.

§ 8.3.3 This Section 8.3 does not preclude recovery of damages for delay by either party under other provisions of the Contract Documents.

ARTICLE 9 PAYMENTS AND COMPLETION

§ 9.1 Contract Sum

§ 9.1.1 The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Owner to the Contractor for performance of the Work under the Contract Documents.

§ 9.1.2 If unit prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed so that application of such unit prices to the actual quantities causes substantial inequity to the Owner or Contractor, the applicable unit prices shall be equitably adjusted.

§ 9.2 Schedule of Values

Where the Contract is based on a stipulated sum or Guaranteed Maximum Price, the Contractor shall submit a schedule of values to the Architect before the first Application for Payment, allocating the entire Contract Sum to the various portions of the Work. The schedule of values shall be prepared in the form, and supported by the data to substantiate its accuracy, required by the Architect. This schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment. Any changes to the schedule of values shall be submitted to the Architect and supported by such data to substantiate its accuracy as the Architect may require, and unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's subsequent Applications for Payment.

§ 9.3 Applications for Payment

§ 9.3.1 At least ten days before the date established for each progress payment, the Contractor shall submit to the Architect an itemized Application for Payment prepared in accordance with the schedule of values, if required under Section 9.2, for completed portions of the Work. The application shall be notarized, if required, and supported by all data substantiating the Contractor's right to payment that the Owner or Architect require, such as copies of requisitions, and releases and waivers of liens from Subcontractors and suppliers, and shall reflect retainage if provided for in the Contract Documents.

§ 9.3.1.1 As provided in Section 7.3.9, such applications may include requests for payment on account of changes in the Work that have been properly authorized by Construction Change Directives, or by interim determinations of the Architect, but not yet included in Change Orders.

§ 9.3.1.2 Applications for Payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay a Subcontractor or supplier, unless such Work has been performed by others whom the Contractor intends to pay.

§ 9.3.2 Unless otherwise provided in the Contract Documents, payments shall be made on account of materials and equipment delivered and suitably stored at the site for subsequent incorporation in the Work. If approved in advance by the Owner, payment may similarly be made for materials and equipment suitably stored off the site at a location agreed upon in writing. Payment for materials and equipment stored on or off the site shall be conditioned upon compliance by the Contractor with procedures satisfactory to the Owner to establish the Owner's title to such materials and equipment or otherwise protect the Owner's interest, and shall include the costs of applicable insurance, storage, and transportation to the site, for such materials and equipment stored off the site.

§ 9.3.3 The Contractor warrants that title to all Work covered by an Application for Payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an Application for Payment all Work for which Certificates for Payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information, and belief, be free and clear of liens, claims, security interests, or encumbrances, in favor of the Contractor, Subcontractors, suppliers, or other persons or entities that provided labor, materials, and equipment relating to the Work.

§ 9.4 Certificates for Payment

§ 9.4.1 The Architect will, within seven days after receipt of the Contractor's Application for Payment, either (1) issue to the Owner a Certificate for Payment in the full amount of the Application for Payment, with a copy to the Contractor; or (2) issue to the Owner a Certificate for Payment for such amount as the Architect determines is properly due, and notify the Contractor and Owner of the Architect's reasons for withholding certification in part as provided in Section 9.5.1; or (3) withhold certification of the entire Application for Payment, and notify the Contractor and Owner of the Architect's reason for withholding certification in whole as provided in Section 9.5.1.

§ 9.4.2 The issuance of a Certificate for Payment will constitute a representation by the Architect to the Owner, based on the Architect's evaluation of the Work and the data in the Application for Payment, that, to the best of the Architect's knowledge, information, and belief, the Work has progressed to the point indicated, the quality of the Work is in accordance with the Contract Documents, and that the Contractor is entitled to payment in the amount certified. The foregoing representations are subject to an evaluation of the Work for conformance with the Contract Documents upon Substantial Completion, to results of subsequent tests and inspections, to correction of minor deviations from the Contract Documents prior to completion, and to specific qualifications expressed by the Architect. However, the issuance of a Certificate for Payment will not be a representation that the Architect has (1) made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (2) reviewed construction means, methods, techniques, sequences, or procedures; (3) reviewed copies of requisitions received from Subcontractors and suppliers and other data requested by the Owner to substantiate the Contractor's right to payment; or (4) made examination to ascertain how or for what purpose the Contractor has used money previously paid on account of the Contract Sum.

§ 9.5 Decisions to Withhold Certification

§ 9.5.1 The Architect may withhold a Certificate for Payment in whole or in part, to the extent reasonably necessary to protect the Owner, if in the Architect's opinion the representations to the Owner required by Section 9.4.2 cannot be made. If the Architect is unable to certify payment in the amount of the Application, the Architect will notify the Contractor and Owner as provided in Section 9.4.1. If the Contractor and Architect cannot agree on a revised amount, the Architect will promptly issue a Certificate for Payment for the amount for which the Architect is able to make such representations to the Owner. The Architect may also withhold a Certificate for Payment or, because of subsequently discovered evidence, may nullify the whole or a part of a Certificate for Payment previously issued, to such extent as may be necessary in the Architect's opinion to protect the Owner from loss for which the Contractor is responsible, including loss resulting from acts and omissions described in Section 3.3.2, because of

- .1 defective Work not remedied;
- .2 third party claims filed or reasonable evidence indicating probable filing of such claims, unless security acceptable to the Owner is provided by the Contractor;
- .3 failure of the Contractor to make payments properly to Subcontractors or suppliers for labor, materials or equipment;

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- .4 reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum;
- .5 damage to the Owner or a Separate Contractor;
- .6 reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay; or
- .7 repeated failure to carry out the Work in accordance with the Contract Documents.

§ 9.5.2 When either party disputes the Architect's decision regarding a Certificate for Payment under Section 9.5.1, in whole or in part, that party may submit a Claim in accordance with Article 15.

§ 9.5.3 When the reasons for withholding certification are removed, certification will be made for amounts previously withheld.

§ 9.5.4 If the Architect withholds certification for payment under Section 9.5.1.3, the Owner may, at its sole option, issue joint checks to the Contractor and to any Subcontractor or supplier to whom the Contractor failed to make payment for Work properly performed or material or equipment suitably delivered. If the Owner makes payments by joint check, the Owner shall notify the Architect and the Contractor shall reflect such payment on its next Application for Payment.

§ 9.6 Progress Payments

§ 9.6.1 After the Architect has issued a Certificate for Payment, the Owner shall make payment in the manner and within the time provided in the Contract Documents, and shall so notify the Architect.

§ 9.6.2 The Contractor shall pay each Subcontractor, no later than seven days after receipt of payment from the Owner, the amount to which the Subcontractor is entitled, reflecting percentages actually retained from payments to the Contractor on account of the Subcontractor's portion of the Work. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

§ 9.6.3 The Architect will, on request, furnish to a Subcontractor, if practicable, information regarding percentages of completion or amounts applied for by the Contractor and action taken thereon by the Architect and Owner on account of portions of the Work done by such Subcontractor.

§ 9.6.4 The Owner has the right to request written evidence from the Contractor that the Contractor has properly paid Subcontractors and suppliers amounts paid by the Owner to the Contractor for subcontracted Work. If the Contractor fails to furnish such evidence within seven days, the Owner shall have the right to contact Subcontractors and suppliers to ascertain whether they have been properly paid. Neither the Owner nor Architect shall have an obligation to pay, or to see to the payment of money to, a Subcontractor or supplier, except as may otherwise be required by law.

§ 9.6.5 The Contractor's payments to suppliers shall be treated in a manner similar to that provided in Sections 9.6.2, 9.6.3 and 9.6.4.

§ 9.6.6 A Certificate for Payment, a progress payment, or partial or entire use or occupancy of the Project by the Owner shall not constitute acceptance of Work not in accordance with the Contract Documents.

§ 9.6.7 Unless the Contractor provides the Owner with a payment bond in the full penal sum of the Contract Sum, payments received by the Contractor for Work properly performed by Subcontractors or provided by suppliers shall be held by the Contractor for those Subcontractors or suppliers who performed Work or furnished materials, or both, under contract with the Contractor for which payment was made by the Owner. Nothing contained herein shall require money to be placed in a separate account and not commingled with money of the Contractor, create any fiduciary liability or tort liability on the part of the Contractor for breach of trust, or entitle any person or entity to an award of punitive damages against the Contractor for breach of the requirements of this provision.

§ 9.6.8 Provided the Owner has fulfilled its payment obligations under the Contract Documents, the Contractor shall defend and indemnify the Owner from all loss, liability, damage or expense, including reasonable attorney's fees and litigation expenses, arising out of any lien claim or other claim for payment by any Subcontractor or supplier of any tier. Upon receipt of notice of a lien claim or other claim for payment, the Owner shall notify the Contractor. If approved by the applicable court, when required, the Contractor may substitute a surety bond for the property against which the lien or other claim for payment has been asserted.

§ 9.7 Failure of Payment

If the Architect does not issue a Certificate for Payment, through no fault of the Contractor, within seven days after receipt of the Contractor's Application for Payment, or if the Owner does not pay the Contractor within seven days after the date established in the Contract Documents, the amount certified by the Architect or awarded by binding dispute resolution, then the Contractor may, upon seven additional days' notice to the Owner and Architect, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shutdown, delay and start-up, plus interest as provided for in the Contract Documents.

§ 9.8 Substantial Completion

§ 9.8.1 Substantial Completion is the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work for its intended use.

§ 9.8.2 When the Contractor considers that the Work, or a portion thereof which the Owner agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Architect a comprehensive list of items to be completed or corrected prior to final payment. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

§ 9.8.3 Upon receipt of the Contractor's list, the Architect will make an inspection to determine whether the Work or designated portion thereof is substantially complete. If the Architect's inspection discloses any item, whether or not included on the Contractor's list, which is not sufficiently complete in accordance with the Contract Documents so that the Owner can occupy or utilize the Work or designated portion thereof for its intended use, the Contractor shall, before issuance of the Certificate of Substantial Completion, complete or correct such item upon notification by the Architect. In such case, the Contractor shall then submit a request for another inspection by the Architect to determine Substantial Completion.

§ 9.8.4 When the Work or designated portion thereof is substantially complete, the Architect will prepare a Certificate of Substantial Completion that shall establish the date of Substantial Completion; establish responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance; and fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work or designated portion thereof unless otherwise provided in the Certificate of Substantial Completion.

§ 9.8.5 The Certificate of Substantial Completion shall be submitted to the Owner and Contractor for their written acceptance of responsibilities assigned to them in the Certificate. Upon such acceptance, and consent of surety if any, the Owner shall make payment of retainage applying to the Work or designated portion thereof. Such payment shall be adjusted for Work that is incomplete or not in accordance with the requirements of the Contract Documents.

§ 9.9 Partial Occupancy or Use

§ 9.9.1 The Owner may occupy or use any completed or partially completed portion of the Work at any stage when such portion is designated by separate agreement with the Contractor, provided such occupancy or use is consented to by the insurer and authorized by public authorities having jurisdiction over the Project. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have accepted in writing the responsibilities assigned to each of them for payments, retainage, if any, security, maintenance, heat, utilities, damage to the Work and insurance, and have agreed in writing concerning the period for correction of the Work and commencement of warranties required by the Contract Documents. When the Contractor considers a portion substantially complete, the Contractor shall prepare and submit a list to the Architect as provided under Section 9.8.2. Consent of the Contractor to partial occupancy or use shall not be unreasonably withheld. The stage of the progress of the Work shall be determined by written agreement between the Owner and Contractor or, if no agreement is reached, by decision of the Architect.

§ 9.9.2 Immediately prior to such partial occupancy or use, the Owner, Contractor, and Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

§ 9.9.3 Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

§ 9.10 Final Completion and Final Payment

§ 9.10.1 Upon receipt of the Contractor's notice that the Work is ready for final inspection and acceptance and upon receipt of a final Application for Payment, the Architect will promptly make such inspection. When the Architect finds the Work acceptable under the Contract Documents and the Contract fully performed, the Architect will promptly issue a final Certificate for Payment stating that to the best of the Architect's knowledge, information and belief, and on the basis of the Architect's on-site visits and inspections, the Work has been completed in accordance with the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable. The Architect's final Certificate for Payment will constitute a further representation that conditions listed in Section 9.10.2 as precedent to the Contractor's being entitled to final payment have been fulfilled.

§ 9.10.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Architect (1) an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the Owner or the Owner's property might be responsible or encumbered (less amounts withheld by Owner) have been paid or otherwise satisfied, (2) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect, (3) a written statement that the Contractor knows of no reason that the insurance will not be renewable to cover the period required by the Contract Documents, (4) consent of surety, if any, to final payment, (5) documentation of any special warranties, such as manufacturers' warranties or specific Subcontractor warranties, and (6) if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts and releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien, claim, security interest, or encumbrance. If a lien, claim, security interest, or encumbrance remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging the lien, claim, security interest, or encumbrance, including all costs and reasonable attorneys' fees.

§ 9.10.3 If, after Substantial Completion of the Work, final completion thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting final completion, and the Architect so confirms, the Owner shall, upon application by the Contractor and certification by the Architect, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed, corrected, and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of the surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Architect prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of Claims.

§ 9.10.4 The making of final payment shall constitute a waiver of Claims by the Owner except those arising from

- .1 liens, Claims, security interests, or encumbrances arising out of the Contract and unsettled;
- .2 failure of the Work to comply with the requirements of the Contract Documents;
- .3 terms of special warranties required by the Contract Documents; or
- .4 audits performed by the Owner, if permitted by the Contract Documents, after final payment.

§ 9.10.5 Acceptance of final payment by the Contractor, a Subcontractor, or a supplier, shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final Application for Payment.

ARTICLE 10 PROTECTION OF PERSONS AND PROPERTY

§ 10.1 Safety Precautions and Programs

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Contract.

§ 10.2 Safety of Persons and Property

§ 10.2.1 The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury, or loss to

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- .1 employees on the Work and other persons who may be affected thereby;
- .2 the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody, or control of the Contractor, a Subcontractor, or a Sub-subcontractor; and
- .3 other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

§ 10.2.2 The Contractor shall comply with, and give notices required by applicable laws, statutes, ordinances, codes, rules and regulations, and lawful orders of public authorities, bearing on safety of persons or property or their protection from damage, injury, or loss.

§ 10.2.3 The Contractor shall implement, erect, and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards; promulgating safety regulations; and notifying the owners and users of adjacent sites and utilities of the safeguards.

§ 10.2.4 When use or storage of explosives or other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel.

§ 10.2.5 The Contractor shall promptly remedy damage and loss (other than damage or loss insured under property insurance required by the Contract Documents) to property referred to in Sections 10.2.1.2 and 10.2.1.3 caused in whole or in part by the Contractor, a Subcontractor, a Sub-subcontractor, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible under Sections 10.2.1.2 and 10.2.1.3. The Contractor may make a Claim for the cost to remedy the damage or loss to the extent such damage or loss is attributable to acts or omissions of the Owner or Architect or anyone directly or indirectly employed by either of them, or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 3.18.

§ 10.2.6 The Contractor shall designate a responsible member of the Contractor's organization at the site whose duty shall be the prevention of accidents. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Owner and Architect.

§ 10.2.7 The Contractor shall not permit any part of the construction or site to be loaded so as to cause damage or create an unsafe condition.

§ 10.2.8 Injury or Damage to Person or Property

If either party suffers injury or damage to person or property because of an act or omission of the other party, or of others for whose acts such party is legally responsible, notice of the injury or damage, whether or not insured, shall be given to the other party within a reasonable time not exceeding 21 days after discovery. The notice shall provide sufficient detail to enable the other party to investigate the matter.

§ 10.3 Hazardous Materials and Substances

§ 10.3.1 The Contractor is responsible for compliance with any requirements included in the Contract Documents regarding hazardous materials or substances. If the Contractor encounters a hazardous material or substance not addressed in the Contract Documents and if reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and notify the Owner and Architect of the condition.

§ 10.3.2 Upon receipt of the Contractor's notice, the Owner shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to cause it to be rendered harmless. Unless otherwise required by the Contract Documents, the Owner shall furnish in writing to the Contractor and Architect the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of the material or substance or who are to perform the task of removal or safe containment of the material or substance. The Contractor and the Architect will

promptly reply to the Owner in writing stating whether or not either has reasonable objection to the persons or entities proposed by the Owner. If either the Contractor or Architect has an objection to a person or entity proposed by the Owner, the Owner shall propose another to whom the Contractor and the Architect have no reasonable objection. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written agreement of the Owner and Contractor. By Change Order, the Contract Time shall be extended appropriately and the Contract Sum shall be increased by the amount of the Contractor's reasonable additional costs of shutdown, delay, and start-up.

§ 10.3.3 To the fullest extent permitted by law, the Owner shall indemnify and hold harmless the Contractor, Subcontractors, Architect, Architect's consultants, and agents and employees of any of them from and against claims, damages, losses, and expenses, including but not limited to attorneys' fees, arising out of or resulting from performance of the Work in the affected area if in fact the material or substance presents the risk of bodily injury or death as described in Section 10.3.1 and has not been rendered harmless, provided that such claim, damage, loss, or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself), except to the extent that such damage, loss, or expense is due to the fault or negligence of the party seeking indemnity.

§ 10.3.4 The Owner shall not be responsible under this Section 10.3 for hazardous materials or substances the Contractor brings to the site unless such materials or substances are required by the Contract Documents. The Owner shall be responsible for hazardous materials or substances required by the Contract Documents, except to the extent of the Contractor's fault or negligence in the use and handling of such materials or substances.

§ 10.3.5 The Contractor shall reimburse the Owner for the cost and expense the Owner incurs (1) for remediation of hazardous materials or substances the Contractor brings to the site and negligently handles, or (2) where the Contractor fails to perform its obligations under Section 10.3.1, except to the extent that the cost and expense are due to the Owner's fault or negligence.

§ 10.3.6 If, without negligence on the part of the Contractor, the Contractor is held liable by a government agency for the cost of remediation of a hazardous material or substance solely by reason of performing Work as required by the Contract Documents, the Owner shall reimburse the Contractor for all cost and expense thereby incurred.

§ 10.4 Emergencies

In an emergency affecting safety of persons or property, the Contractor shall act, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 15 and Article 7.

ARTICLE 11 INSURANCE AND BONDS

§ 11.1 Contractor's Insurance and Bonds

§ 11.1.1 The Contractor shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Contractor shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located. The Owner, Architect, and Architect's consultants shall be named as additional insureds under the Contractor's commercial general liability policy or as otherwise described in the Contract Documents.

§ 11.1.2 The Contractor shall provide surety bonds of the types, for such penal sums, and subject to such terms and conditions as required by the Contract Documents. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 11.1.3 Upon the request of any person or entity appearing to be a potential beneficiary of bonds covering payment of obligations arising under the Contract, the Contractor shall promptly furnish a copy of the bonds or shall authorize a copy to be furnished.

§ 11.1.4 Notice of Cancellation or Expiration of Contractor's Required Insurance. Within three (3) business days of the date the Contractor becomes aware of an impending or actual cancellation or expiration of any insurance required by the Contract Documents, the Contractor shall provide notice to the Owner of such impending or actual cancellation or

expiration. Upon receipt of notice from the Contractor, the Owner shall, unless the lapse in coverage arises from an act or omission of the Owner, have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by the Contractor. The furnishing of notice by the Contractor shall not relieve the Contractor of any contractual obligation to provide any required coverage.

§ 11.2 Owner's Insurance

§ 11.2.1 The Owner shall purchase and maintain insurance of the types and limits of liability, containing the endorsements, and subject to the terms and conditions, as described in the Agreement or elsewhere in the Contract Documents. The Owner shall purchase and maintain the required insurance from an insurance company or insurance companies lawfully authorized to issue insurance in the jurisdiction where the Project is located.

§ 11.2.2 **Failure to Purchase Required Property Insurance.** If the Owner fails to purchase and maintain the required property insurance, with all of the coverages and in the amounts described in the Agreement or elsewhere in the Contract Documents, the Owner shall inform the Contractor in writing prior to commencement of the Work. Upon receipt of notice from the Owner, the Contractor may delay commencement of the Work and may obtain insurance that will protect the interests of the Contractor, Subcontractors, and Sub-Subcontractors in the Work. When the failure to provide coverage has been cured or resolved, the Contract Sum and Contract Time shall be equitably adjusted. In the event the Owner fails to procure coverage, the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent the loss to the Owner would have been covered by the insurance to have been procured by the Owner. The cost of the insurance shall be charged to the Owner by a Change Order. If the Owner does not provide written notice, and the Contractor is damaged by the failure or neglect of the Owner to purchase or maintain the required insurance, the Owner shall reimburse the Contractor for all reasonable costs and damages attributable thereto.

§ 11.2.3 **Notice of Cancellation or Expiration of Owner's Required Property Insurance.** Within three (3) business days of the date the Owner becomes aware of an impending or actual cancellation or expiration of any property insurance required by the Contract Documents, the Owner shall provide notice to the Contractor of such impending or actual cancellation or expiration. Unless the lapse in coverage arises from an act or omission of the Contractor: (1) the Contractor, upon receipt of notice from the Owner, shall have the right to stop the Work until the lapse in coverage has been cured by the procurement of replacement coverage by either the Owner or the Contractor; (2) the Contract Time and Contract Sum shall be equitably adjusted; and (3) the Owner waives all rights against the Contractor, Subcontractors, and Sub-subcontractors to the extent any loss to the Owner would have been covered by the insurance had it not expired or been cancelled. If the Contractor purchases replacement coverage, the cost of the insurance shall be charged to the Owner by an appropriate Change Order. The furnishing of notice by the Owner shall not relieve the Owner of any contractual obligation to provide required insurance.

§ 11.3 Waivers of Subrogation

§ 11.3.1 The Owner and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other; (2) the Architect and Architect's consultants; and (3) Separate Contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire, or other causes of loss, to the extent those losses are covered by property insurance required by the Agreement or other property insurance applicable to the Project, except such rights as they have to proceeds of such insurance. The Owner or Contractor, as appropriate, shall require similar written waivers in favor of the individuals and entities identified above from the Architect, Architect's consultants, Separate Contractors, subcontractors, and sub-subcontractors. The policies of insurance purchased and maintained by each person or entity agreeing to waive claims pursuant to this section 11.3.1 shall not prohibit this waiver of subrogation. This waiver of subrogation shall be effective as to a person or entity (1) even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, (2) even though that person or entity did not pay the insurance premium directly or indirectly, or (3) whether or not the person or entity had an insurable interest in the damaged property.

§ 11.3.2 If during the Project construction period the Owner insures properties, real or personal or both, at or adjacent to the site by property insurance under policies separate from those insuring the Project, or if after final payment property insurance is to be provided on the completed Project through a policy or policies other than those insuring the Project during the construction period, to the extent permissible by such policies, the Owner waives all rights in accordance with the terms of Section 11.3.1 for damages caused by fire or other causes of loss covered by this separate property insurance.

§ 11.4 Loss of Use, Business Interruption, and Delay in Completion Insurance

The Owner, at the Owner's option, may purchase and maintain insurance that will protect the Owner against loss of use of the Owner's property, or the inability to conduct normal operations, due to fire or other causes of loss. The Owner waives all rights of action against the Contractor and Architect for loss of use of the Owner's property, due to fire or other hazards however caused.

§11.5 Adjustment and Settlement of Insured Loss

§ 11.5.1 A loss insured under the property insurance required by the Agreement shall be adjusted by the Owner as fiduciary and made payable to the Owner as fiduciary for the insureds, as their interests may appear, subject to requirements of any applicable mortgagee clause and of Section 11.5.2. The Owner shall pay the Architect and Contractor their just shares of insurance proceeds received by the Owner, and by appropriate agreements the Architect and Contractor shall make payments to their consultants and Subcontractors in similar manner.

§ 11.5.2 Prior to settlement of an insured loss, the Owner shall notify the Contractor of the terms of the proposed settlement as well as the proposed allocation of the insurance proceeds. The Contractor shall have 14 days from receipt of notice to object to the proposed settlement or allocation of the proceeds. If the Contractor does not object, the Owner shall settle the loss and the Contractor shall be bound by the settlement and allocation. Upon receipt, the Owner shall deposit the insurance proceeds in a separate account and make the appropriate distributions. Thereafter, if no other agreement is made or the Owner does not terminate the Contract for convenience, the Owner and Contractor shall execute a Change Order for reconstruction of the damaged or destroyed Work in the amount allocated for that purpose. If the Contractor timely objects to either the terms of the proposed settlement or the allocation of the proceeds, the Owner may proceed to settle the insured loss, and any dispute between the Owner and Contractor arising out of the settlement or allocation of the proceeds shall be resolved pursuant to Article 15. Pending resolution of any dispute, the Owner may issue a Construction Change Directive for the reconstruction of the damaged or destroyed Work.

ARTICLE 12 UNCOVERING AND CORRECTION OF WORK

§ 12.1 Uncovering of Work

§ 12.1.1 If a portion of the Work is covered contrary to the Architect's request or to requirements specifically expressed in the Contract Documents, it must, if requested in writing by the Architect, be uncovered for the Architect's examination and be replaced at the Contractor's expense without change in the Contract Time.

§ 12.1.2 If a portion of the Work has been covered that the Architect has not specifically requested to examine prior to its being covered, the Architect may request to see such Work and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, the Contractor shall be entitled to an equitable adjustment to the Contract Sum and Contract Time as may be appropriate. If such Work is not in accordance with the Contract Documents, the costs of uncovering the Work, and the cost of correction, shall be at the Contractor's expense.

§ 12.2 Correction of Work

§ 12.2.1 Before Substantial Completion

The Contractor shall promptly correct Work rejected by the Architect or failing to conform to the requirements of the Contract Documents, discovered before Substantial Completion and whether or not fabricated, installed or completed. Costs of correcting such rejected Work, including additional testing and inspections, the cost of uncovering and replacement, and compensation for the Architect's services and expenses made necessary thereby, shall be at the Contractor's expense.

§ 12.2.2 After Substantial Completion

§ 12.2.2.1 In addition to the Contractor's obligations under Section 3.5, if, within one year after the date of Substantial Completion of the Work or designated portion thereof or after the date for commencement of warranties established under Section 9.9.1, or by terms of any applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of notice from the Owner to do so, unless the Owner has previously given the Contractor a written acceptance of such condition. The Owner shall give such notice promptly after discovery of the condition. During the one-year period for correction of Work, if the Owner fails to notify the Contractor and give the Contractor an opportunity to make the correction, the Owner waives the rights to require correction by the Contractor and to make a claim for breach of warranty. If the Contractor fails to correct nonconforming Work within a reasonable time during

that period after receipt of notice from the Owner or Architect, the Owner may correct it in accordance with Section 2.5.

§ 12.2.2.2 The one-year period for correction of Work shall be extended with respect to portions of Work first performed after Substantial Completion by the period of time between Substantial Completion and the actual completion of that portion of the Work.

§ 12.2.2.3 The one-year period for correction of Work shall not be extended by corrective Work performed by the Contractor pursuant to this Section 12.2.

§ 12.2.3 The Contractor shall remove from the site portions of the Work that are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.

§ 12.2.4 The Contractor shall bear the cost of correcting destroyed or damaged construction of the Owner or Separate Contractors, whether completed or partially completed, caused by the Contractor's correction or removal of Work that is not in accordance with the requirements of the Contract Documents.

§ 12.2.5 Nothing contained in this Section 12.2 shall be construed to establish a period of limitation with respect to other obligations the Contractor has under the Contract Documents. Establishment of the one-year period for correction of Work as described in Section 12.2.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

§ 12.3 Acceptance of Nonconforming Work

If the Owner prefers to accept Work that is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Sum will be reduced as appropriate and equitable. Such adjustment shall be effected whether or not final payment has been made.

ARTICLE 13 MISCELLANEOUS PROVISIONS

§ 13.1 Governing Law

The Contract shall be governed by the law of the place where the Project is located, excluding that jurisdiction's choice of law rules. If the parties have selected arbitration as the method of binding dispute resolution, the Federal Arbitration Act shall govern Section 15.4.

§ 13.2 Successors and Assigns

§ 13.2.1 The Owner and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to covenants, agreements, and obligations contained in the Contract Documents. Except as provided in Section 13.2.2, neither party to the Contract shall assign the Contract as a whole without written consent of the other. If either party attempts to make an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

§ 13.2.2 The Owner may, without consent of the Contractor, assign the Contract to a lender providing construction financing for the Project, if the lender assumes the Owner's rights and obligations under the Contract Documents. The Contractor shall execute all consents reasonably required to facilitate the assignment.

§ 13.3 Rights and Remedies

§ 13.3.1 Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

§ 13.3.2 No action or failure to act by the Owner, Architect, or Contractor shall constitute a waiver of a right or duty afforded them under the Contract, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed upon in writing.

§ 13.4 Tests and Inspections

§ 13.4.1 Tests, inspections, and approvals of portions of the Work shall be made as required by the Contract Documents and by applicable laws, statutes, ordinances, codes, rules, and regulations or lawful orders of public authorities. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections, and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections, and approvals. The Contractor shall give the Architect timely notice of when and where tests and inspections are to be made so that the Architect may be present for such procedures. The Owner shall bear costs of tests, inspections, or approvals that do not become requirements until after bids are received or negotiations concluded. The Owner shall directly arrange and pay for tests, inspections, or approvals where building codes or applicable laws or regulations so require.

§ 13.4.2 If the Architect, Owner, or public authorities having jurisdiction determine that portions of the Work require additional testing, inspection, or approval not included under Section 13.4.1, the Architect will, upon written authorization from the Owner, instruct the Contractor to make arrangements for such additional testing, inspection, or approval, by an entity acceptable to the Owner, and the Contractor shall give timely notice to the Architect of when and where tests and inspections are to be made so that the Architect may be present for such procedures. Such costs, except as provided in Section 13.4.3, shall be at the Owner's expense.

§ 13.4.3 If procedures for testing, inspection, or approval under Sections 13.4.1 and 13.4.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Architect's services and expenses, shall be at the Contractor's expense.

§ 13.4.4 Required certificates of testing, inspection, or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Architect.

§ 13.4.5 If the Architect is to observe tests, inspections, or approvals required by the Contract Documents, the Architect will do so promptly and, where practicable, at the normal place of testing.

§ 13.4.6 Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work.

§ 13.5 Interest

Payments due and unpaid under the Contract Documents shall bear interest from the date payment is due at the rate the parties agree upon in writing or, in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

ARTICLE 14 TERMINATION OR SUSPENSION OF THE CONTRACT

§ 14.1 Termination by the Contractor

§ 14.1.1 The Contractor may terminate the Contract if the Work is stopped for a period of 30 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, for any of the following reasons:

- .1 Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped;
- .2 An act of government, such as a declaration of national emergency, that requires all Work to be stopped;
- .3 Because the Architect has not issued a Certificate for Payment and has not notified the Contractor of the reason for withholding certification as provided in Section 9.4.1, or because the Owner has not made payment on a Certificate for Payment within the time stated in the Contract Documents; or
- .4 The Owner has failed to furnish to the Contractor reasonable evidence as required by Section 2.2.

§ 14.1.2 The Contractor may terminate the Contract if, through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons or entities performing portions of the Work, repeated suspensions, delays, or interruptions of the entire Work by the Owner as described in Section 14.3, constitute in the aggregate more than 100 percent of the total number of days scheduled for completion, or 120 days in any 365-day period, whichever is less.

§ 14.1.3 If one of the reasons described in Section 14.1.1 or 14.1.2 exists, the Contractor may, upon seven days' notice to the Owner and Architect, terminate the Contract and recover from the Owner payment for Work executed, as well as reasonable overhead and profit on Work not executed, and costs incurred by reason of such termination.

§ 14.1.4 If the Work is stopped for a period of 60 consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, or their agents or employees or any other persons or entities performing portions of the Work because the Owner has repeatedly failed to fulfill the Owner's obligations under the Contract Documents with respect to matters important to the progress of the Work, the Contractor may, upon seven additional days' notice to the Owner and the Architect, terminate the Contract and recover from the Owner as provided in Section 14.1.3.

§ 14.2 Termination by the Owner for Cause

§ 14.2.1 The Owner may terminate the Contract if the Contractor

- .1 repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
- .2 fails to make payment to Subcontractors or suppliers in accordance with the respective agreements between the Contractor and the Subcontractors or suppliers;
- .3 repeatedly disregards applicable laws, statutes, ordinances, codes, rules and regulations, or lawful orders of a public authority; or
- .4 otherwise is guilty of substantial breach of a provision of the Contract Documents.

§ 14.2.2 When any of the reasons described in Section 14.2.1 exist, and upon certification by the Architect that sufficient cause exists to justify such action, the Owner may, without prejudice to any other rights or remedies of the Owner and after giving the Contractor and the Contractor's surety, if any, seven days' notice, terminate employment of the Contractor and may, subject to any prior rights of the surety:

- .1 Exclude the Contractor from the site and take possession of all materials, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;
- .2 Accept assignment of subcontracts pursuant to Section 5.4; and
- .3 Finish the Work by whatever reasonable method the Owner may deem expedient. Upon written request of the Contractor, the Owner shall furnish to the Contractor a detailed accounting of the costs incurred by the Owner in finishing the Work.

§ 14.2.3 When the Owner terminates the Contract for one of the reasons stated in Section 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is finished.

§ 14.2.4 If the unpaid balance of the Contract Sum exceeds costs of finishing the Work, including compensation for the Architect's services and expenses made necessary thereby, and other damages incurred by the Owner and not expressly waived, such excess shall be paid to the Contractor. If such costs and damages exceed the unpaid balance, the Contractor shall pay the difference to the Owner. The amount to be paid to the Contractor or Owner, as the case may be, shall be certified by the Initial Decision Maker, upon application, and this obligation for payment shall survive termination of the Contract.

§ 14.3 Suspension by the Owner for Convenience

§ 14.3.1 The Owner may, without cause, order the Contractor in writing to suspend, delay or interrupt the Work, in whole or in part for such period of time as the Owner may determine.

§ 14.3.2 The Contract Sum and Contract Time shall be adjusted for increases in the cost and time caused by suspension, delay, or interruption under Section 14.3.1. Adjustment of the Contract Sum shall include profit. No adjustment shall be made to the extent

- .1 that performance is, was, or would have been, so suspended, delayed, or interrupted, by another cause for which the Contractor is responsible; or
- .2 that an equitable adjustment is made or denied under another provision of the Contract.

§ 14.4 Termination by the Owner for Convenience

§ 14.4.1 The Owner may, at any time, terminate the Contract for the Owner's convenience and without cause.

§ 14.4.2 Upon receipt of notice from the Owner of such termination for the Owner's convenience, the Contractor shall

- .1 cease operations as directed by the Owner in the notice;

- .2 take actions necessary, or that the Owner may direct, for the protection and preservation of the Work; and
- .3 except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts and purchase orders.

§ 14.4.3 In case of such termination for the Owner's convenience, the Owner shall pay the Contractor for Work properly executed; costs incurred by reason of the termination, including costs attributable to termination of Subcontracts; and the termination fee, if any, set forth in the Agreement.

ARTICLE 15 CLAIMS AND DISPUTES

§ 15.1 Claims

§ 15.1.1 Definition

A Claim is a demand or assertion by one of the parties seeking, as a matter of right, payment of money, a change in the Contract Time, or other relief with respect to the terms of the Contract. The term "Claim" also includes other disputes and matters in question between the Owner and Contractor arising out of or relating to the Contract. The responsibility to substantiate Claims shall rest with the party making the Claim. This Section 15.1.1 does not require the Owner to file a Claim in order to impose liquidated damages in accordance with the Contract Documents.

§ 15.1.2 Time Limits on Claims

The Owner and Contractor shall commence all Claims and causes of action against the other and arising out of or related to the Contract, whether in contract, tort, breach of warranty or otherwise, in accordance with the requirements of the binding dispute resolution method selected in the Agreement and within the period specified by applicable law, but in any case not more than 10 years after the date of Substantial Completion of the Work. The Owner and Contractor waive all Claims and causes of action not commenced in accordance with this Section 15.1.2.

§ 15.1.3 Notice of Claims

§ 15.1.3.1 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered prior to expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party and to the Initial Decision Maker with a copy sent to the Architect, if the Architect is not serving as the Initial Decision Maker. Claims by either party under this Section 15.1.3.1 shall be initiated within 21 days after occurrence of the event giving rise to such Claim or within 21 days after the claimant first recognizes the condition giving rise to the Claim, whichever is later.

§ 15.1.3.2 Claims by either the Owner or Contractor, where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2, shall be initiated by notice to the other party. In such event, no decision by the Initial Decision Maker is required.

§ 15.1.4 Continuing Contract Performance

§ 15.1.4.1 Pending final resolution of a Claim, except as otherwise agreed in writing or as provided in Section 9.7 and Article 14, the Contractor shall proceed diligently with performance of the Contract and the Owner shall continue to make payments in accordance with the Contract Documents.

§ 15.1.4.2 The Contract Sum and Contract Time shall be adjusted in accordance with the Initial Decision Maker's decision, subject to the right of either party to proceed in accordance with this Article 15. The Architect will issue Certificates for Payment in accordance with the decision of the Initial Decision Maker.

§ 15.1.5 Claims for Additional Cost

If the Contractor wishes to make a Claim for an increase in the Contract Sum, notice as provided in Section 15.1.3 shall be given before proceeding to execute the portion of the Work that is the subject of the Claim. Prior notice is not required for Claims relating to an emergency endangering life or property arising under Section 10.4.

§ 15.1.6 Claims for Additional Time

§ 15.1.6.1 If the Contractor wishes to make a Claim for an increase in the Contract Time, notice as provided in Section 15.1.3 shall be given. The Contractor's Claim shall include an estimate of cost and of probable effect of delay on progress of the Work. In the case of a continuing delay, only one Claim is necessary.

§ 15.1.6.2 If adverse weather conditions are the basis for a Claim for additional time, such Claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated, and had an adverse effect on the scheduled construction.

§ 15.1.7 Waiver of Claims for Consequential Damages

The Contractor and Owner waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes

- .1 damages incurred by the Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- .2 damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit, except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with Article 14. Nothing contained in this Section 15.1.7 shall be deemed to preclude assessment of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

§ 15.2 Initial Decision

§ 15.2.1 Claims, excluding those where the condition giving rise to the Claim is first discovered after expiration of the period for correction of the Work set forth in Section 12.2.2 or arising under Sections 10.3, 10.4, and 11.5, shall be referred to the Initial Decision Maker for initial decision. The Architect will serve as the Initial Decision Maker, unless otherwise indicated in the Agreement. Except for those Claims excluded by this Section 15.2.1, an initial decision shall be required as a condition precedent to mediation of any Claim. If an initial decision has not been rendered within 30 days after the Claim has been referred to the Initial Decision Maker, the party asserting the Claim may demand mediation and binding dispute resolution without a decision having been rendered. Unless the Initial Decision Maker and all affected parties agree, the Initial Decision Maker will not decide disputes between the Contractor and persons or entities other than the Owner.

§ 15.2.2 The Initial Decision Maker will review Claims and within ten days of the receipt of a Claim take one or more of the following actions: (1) request additional supporting data from the claimant or a response with supporting data from the other party, (2) reject the Claim in whole or in part, (3) approve the Claim, (4) suggest a compromise, or (5) advise the parties that the Initial Decision Maker is unable to resolve the Claim if the Initial Decision Maker lacks sufficient information to evaluate the merits of the Claim or if the Initial Decision Maker concludes that, in the Initial Decision Maker's sole discretion, it would be inappropriate for the Initial Decision Maker to resolve the Claim.

§ 15.2.3 In evaluating Claims, the Initial Decision Maker may, but shall not be obligated to, consult with or seek information from either party or from persons with special knowledge or expertise who may assist the Initial Decision Maker in rendering a decision. The Initial Decision Maker may request the Owner to authorize retention of such persons at the Owner's expense.

§ 15.2.4 If the Initial Decision Maker requests a party to provide a response to a Claim or to furnish additional supporting data, such party shall respond, within ten days after receipt of the request, and shall either (1) provide a response on the requested supporting data, (2) advise the Initial Decision Maker when the response or supporting data will be furnished, or (3) advise the Initial Decision Maker that no supporting data will be furnished. Upon receipt of the response or supporting data, if any, the Initial Decision Maker will either reject or approve the Claim in whole or in part.

§ 15.2.5 The Initial Decision Maker will render an initial decision approving or rejecting the Claim, or indicating that the Initial Decision Maker is unable to resolve the Claim. This initial decision shall (1) be in writing; (2) state the reasons therefor; and (3) notify the parties and the Architect, if the Architect is not serving as the Initial Decision Maker, of any change in the Contract Sum or Contract Time or both. The initial decision shall be final and binding on the parties but subject to mediation and, if the parties fail to resolve their dispute through mediation, to binding dispute resolution.

§ 15.2.6 Either party may file for mediation of an initial decision at any time, subject to the terms of Section 15.2.6.1.

§ 15.2.6.1 Either party may, within 30 days from the date of receipt of an initial decision, demand in writing that the other party file for mediation. If such a demand is made and the party receiving the demand fails to file for mediation within 30 days after receipt thereof, then both parties waive their rights to mediate or pursue binding dispute resolution proceedings with respect to the initial decision.

§ 15.2.7 In the event of a Claim against the Contractor, the Owner may, but is not obligated to, notify the surety, if any, of the nature and amount of the Claim. If the Claim relates to a possibility of a Contractor's default, the Owner may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

§ 15.2.8 If a Claim relates to or is the subject of a mechanic's lien, the party asserting such Claim may proceed in accordance with applicable law to comply with the lien notice or filing deadlines.

§ 15.3 Mediation

§ 15.3.1 Claims, disputes, or other matters in controversy arising out of or related to the Contract, except those waived as provided for in Sections 9.10.4, 9.10.5, and 15.1.7, shall be subject to mediation as a condition precedent to binding dispute resolution.

§ 15.3.2 The parties shall endeavor to resolve their Claims by mediation which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Mediation Procedures in effect on the date of the Agreement. A request for mediation shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the mediation. The request may be made concurrently with the filing of binding dispute resolution proceedings but, in such event, mediation shall proceed in advance of binding dispute resolution proceedings, which shall be stayed pending mediation for a period of 60 days from the date of filing, unless stayed for a longer period by agreement of the parties or court order. If an arbitration is stayed pursuant to this Section 15.3.2, the parties may nonetheless proceed to the selection of the arbitrator(s) and agree upon a schedule for later proceedings.

§ 15.3.3 Either party may, within 30 days from the date that mediation has been concluded without resolution of the dispute or 60 days after mediation has been demanded without resolution of the dispute, demand in writing that the other party file for binding dispute resolution. If such a demand is made and the party receiving the demand fails to file for binding dispute resolution within 60 days after receipt thereof, then both parties waive their rights to binding dispute resolution proceedings with respect to the initial decision.

§ 15.3.4 The parties shall share the mediator's fee and any filing fees equally. The mediation shall be held in the place where the Project is located, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof.

§ 15.4 Arbitration

§ 15.4.1 If the parties have selected arbitration as the method for binding dispute resolution in the Agreement, any Claim subject to, but not resolved by, mediation shall be subject to arbitration which, unless the parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the date of the Agreement. The Arbitration shall be conducted in the place where the Project is located, unless another location is mutually agreed upon. A demand for arbitration shall be made in writing, delivered to the other party to the Contract, and filed with the person or entity administering the arbitration. The party filing a notice of demand for arbitration must assert in the demand all Claims then known to that party on which arbitration is permitted to be demanded.

§ 15.4.1.1 A demand for arbitration shall be made no earlier than concurrently with the filing of a request for mediation, but in no event shall it be made after the date when the institution of legal or equitable proceedings based on the Claim would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the institution of legal or equitable proceedings based on the Claim.

§ 15.4.2 The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

§ 15.4.3 The foregoing agreement to arbitrate and other agreements to arbitrate with an additional person or entity duly consented to by parties to the Agreement, shall be specifically enforceable under applicable law in any court having jurisdiction thereof.

§ 15.4.4 Consolidation or Joinder

§ 15.4.4.1 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may consolidate an arbitration conducted under this Agreement with any other arbitration to which it is a party provided that (1) the arbitration agreement governing the other arbitration permits consolidation, (2) the arbitrations to be consolidated substantially involve common questions of law or fact, and (3) the arbitrations employ materially similar procedural rules and methods for selecting arbitrator(s).

§ 15.4.4.2 Subject to the rules of the American Arbitration Association or other applicable arbitration rules, either party may include by joinder persons or entities substantially involved in a common question of law or fact whose presence is required if complete relief is to be accorded in arbitration, provided that the party sought to be joined consents in writing to such joinder. Consent to arbitration involving an additional person or entity shall not constitute consent to arbitration of any claim, dispute or other matter in question not described in the written consent.

§ 15.4.4.3 The Owner and Contractor grant to any person or entity made a party to an arbitration conducted under this Section 15.4, whether by joinder or consolidation, the same rights of joinder and consolidation as those of the Owner and Contractor under this Agreement.

Additions and Deletions Report for **AIA® Document A201™ – 2017**

This Additions and Deletions Report, as defined on page 1 of the associated document, reproduces below all text the author has added to the standard form AIA document in order to complete it, as well as any text the author may have added to or deleted from the original AIA text. Added text is shown underlined. Deleted text is indicated with a horizontal line through the original AIA text.

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There are no differences.

Certification of Document's Authenticity

AIA® Document D401™ – 2003

I, _____, hereby certify, to the best of my knowledge, information and belief, that I created the attached final document simultaneously with its associated Additions and Deletions Report and this certification at 13:53:58 on 07/19/2018 under Order No. 8017412562 from AIA Contract Documents software and that in preparing the attached final document I made no changes to the original text of AIA® Document A201™ – 2017, General Conditions of the Contract for Construction, as published by the AIA in its software, other than those additions and deletions shown in the associated Additions and Deletions Report.

(Signed)

(Title)

(Dated)

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 00 80 00 – SUPPLEMENTARY GENERAL CONDITIONS

SUPPLEMENTS TO A.I.A. DOCUMENT A201, 2017 EDITION
GENERAL CONDITIONS FOR THE CONTRACT FOR CONSTRUCTION

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GENERAL

These Supplementary General Conditions modify, change, delete from, or add to the "General Conditions of the Contract for Construction," A.I.A. Document A201, 2017 Edition. The A.I.A Document A201, 2017 Edition is hereby made a part of every Section of these Specifications and shall be binding upon each Contractor, Subcontractor, and Material Supplier. Where any Article of the General Conditions is modified, or any Paragraph, Subparagraph, or Sub-Subparagraph thereof is modified or deleted by these Supplementary General Conditions, the unaltered provisions of the Article, Paragraph, Subparagraph, or Sub-Subparagraph shall remain in effect.

ARTICLE 1 - GENERAL PROVISIONS:

1.1 BASIC DEFINITIONS:

1.1 Supplement Paragraph 1.1 as follows:

“1.1.1.1 The General Contractor’s and Subcontractor's Proposal Forms as accepted by the Owner shall be a part of the Contract Documents.

1.1.9 "Provide", as used in the Contract Documents, includes furnishing all labor, supervision, tools, materials, supplies, equipment, shop drawings, product data and samples, together with all services, accessories and costs associated with performance of the work, or production or installation of an item or system usable in the complete project.

1.1.10 “Diagrammatic”, as used in the Contract Documents, shall mean to outline in schematic form or an illustration to be used as a guide only.

1.1.11 “Product”, as used in these Contract Documents, includes materials, systems and equipment.”

1.2 CORRELATION AND INTENT OF THE CONTRACT DOCUMENTS:

1.2.1 Delete subsection entirely and substitute the following:

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

“1.2.1 The intent of the Contract Documents is to include all items necessary for the execution and completion of the work by the Contractor. The Contract Documents are complementary, and what is required by anyone shall be as binding as if required by all. Performance by the Contractor and Subcontractors shall be required to produce the intended results. In cases of discrepancies between the Contract Documents, the Agreement shall take precedence over the Drawings and Specifications, and the Specifications shall take precedence over the Drawings, except as listed. Large scale plans, sections, and details take precedence over smaller scaled items. Plan schedules shall control over general plans. Addenda and Change Orders supersede only affected portions of the Documents.

1.2.1.1 The Contractor/Subcontractor, however, shall be held to providing completed work, according to the meaning and intent of the Drawings and Specifications whether all the items involved under any trade are mentioned in one or several sections or on one or several drawings.

1.2.1.2 Should any item to be furnished or labor to be performed as specified under more than one Section of the Specification, it will be premised that Subcontractors have included said product and/or labor in more than one Section, unless he shall have obtained a written decision from the Construction Manager prior to the bid. The Construction Manager will decide who shall provide such items. Proper credit shall be given to the Owner when the cost has been included more than once.

1.2.1.3 Should any item or equipment required to be furnished within the drawings or specifications fail to have any or all of its connections or utilities indicated, the Contractor and Subcontractors shall provide (as a minimum) services, utilities and connections to ensure the permanent, proper, code compliant operation of the item or equipment; unless such condition shall have been brought to the attention of the Architect prior to the Bid and a decision rendered through the issuance of addenda or other items of clarification.

1.2.1.4 The Contractor, and Subcontractors shall not take advantage of errors or omissions on Drawings or Specifications.

1.2.1.5 If any errors or omissions appear in Drawings, Specifications, or other Contract Documents, the Subcontractors shall notify the Contractor before time of submitting bid. The Contractor will notify and resolve the issues with the Architect prior to submitting a guaranteed maximum price or Bid Proposal to the Owner. Should conflict occur in or between Drawings and Specifications; Contractor and Subcontractors are deemed to have estimated on the more expensive product, method of installation, and/or the greater quantity, unless he has requested and obtained a written decision before submission of bid proposals as to which method, product, or quantity will be required.

1.2.1.6 References to known standard specifications shall mean the latest edition of such specifications adopted and published at date of invitation to submit proposal. Words which have well-known technical or trade meanings are used herein accordance with such recognized meanings.

1.2.1.7 When dimensions as shown on the Drawings are affected by conditions already established, the Subcontractor shall take measurements to verify the given scale or figure dimensions in the Drawings.

1.2.1.8 The Specifications, detailed description or omission of it, concerning any work to be provided shall be regarded as meaning that only the best general practice of the trade is to prevail and that only materials and workmanship of the first quality are to be used. All interpretations of these Specifications shall be made upon this basis and all interpretations shall be made by the Architect.

1.2.1.9 Execute work as per Contract Documents. Make no changes without having first received written permission from the Architect. Where detailed information is lacking, before proceeding with work, refer matter to the Architect for additional information.

1.2.1.10 THE MECHANICAL AND ELECTRICAL SYSTEM DRAWINGS ARE DIAGRAMMATIC IN NATURE AND THE FIELD CONDITIONS MAY ARISE THAT WILL PREVENT THEIR BEING INSTALLED AS PER DRAWING (EX.), SUCH AS PIPE AND CONDUIT RUNS, CROSSOVERS, RISERS, DOORS, FLOOR, WALLS AND CEILING PATTERN COVERING LAYOUTS, ETC. THEREFORE, IT SHALL BE THE RESPONSIBILITY OF EACH AND ALL SUBCONTRACTORS, FOR THE COORDINATION, TIMING AND PROTECTION OF ALL CONDITIONS; AND IN EACH CASE WHERE THERE IS ANY QUESTION OR PROBLEM AS TO CONDITIONS OR LOCATIONS OF THESE ITEMS, SUBMIT A WORKABLE SOLUTION TO THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR AND THE ARCHITECT FOR REVIEW AND WRITTEN APPROVAL BEFORE COMMENCING WITH QUESTIONABLE WORK. IF SUCH ADJUSTMENT SHALL BE MADE BY THE SUBCONTRACTOR WITHOUT WRITTEN APPROVAL, IT SHALL BE AT THEIR OWN RISK AND EXPENSE. ANY REMOVAL OF NON-APPROVED AREAS SHALL BE THE RESPONSIBILITY AND EXPENSE OF THE SUBCONTRACTORS.

1.2.1.11 Where there is conflict between the Drawings, or between Drawings and Specifications, or doubt as to meaning, the Contractor and Subcontractors shall obtain a written decision from the Architect, except where the Contractor deems that there could be immediate damages to life or property. He shall not proceed in uncertainty in any instance.

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

1.2.1.12 In the case of discrepancies between the INFORMATION TO BIDDERS, CONDITIONS OF THE CONTRACT, DRAWINGS, SPECIFICATIONS, OR ADDENDA as it relates to each Subcontractor's Work Category responsibilities, the most stringent and/or most expensive case applies as determined by the Architect.”

1.2.2 Add the following:

“1.2.2.1 Construction Specifications Institute (C.S.I. Uniform System): To assist the Contract, the Specifications are divided into Divisions and Section numbers generally conforming to "Uniform System for Construction Specifications.”

ARTICLE 2 - OWNER:

2.1 GENERAL:

2.1.1 Add the following subparagraphs:

“2.1.1.1 THE TERM "ARCHITECT" AS USED IN THE GENERAL CONDITIONS SHALL MEAN JRA ARCHITECTS, INC. WHERE THE TERM "A/E", "ARCHITECT/ENGINEER", OR "ENGINEER" IS USED IN THE DOCUMENTS, IT SHALL BE CONSIDERED AS BEING SYNONYMOUS WITH THE TERM "ARCHITECT" AS DEFINED IN THE GENERAL CONDITIONS.

2.1.1.2 The use of phrases "as directed", "as instructed", "reviewed", "authorized", "accepted", and similar terms implies that such action will be taken by the Architect unless specifically stated otherwise.”

2.2 INFORMATION AND SERVICES REQUIRED OF THE OWNER:

2.2.5.1 Add the following:

“2.2.5.1 The Contractor will be furnished with ONE (1) reproducible digital (PDF format) set of Drawings and Specifications by the Owner (other sets may be furnished but are not a requirement under this contract). A complete set of portable document format (.pdf) documents (plans and specifications) will be made available to the Contractor for the printing processes. The Contractor will make the portable document format documents available to the Subcontractors. The Architect will provide the Contractor with the original digital BIM Revit Model and/or AutoCAD files of the building and site for the Contractor’s and Subcontractor’s use to prepare Shop Drawings, Coordination Drawings, and Submittals upon receipt of accepted AIA Documents E203-2013 and G201-2013 Digital Protocol Agreements and the Architect’s Digital File Release Forms from all users.”

2.4 OWNERS RIGHT TO CARRY OUT THE WORK:

2.4.1 Add the following:

“2.4.1 The Owner will assist the Architect and Contractor in determining in general that the Work of the Subcontractors is being performed in accordance with the Contract Documents and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor and Subcontractors.”

ARTICLE 3 - CONTRACTOR:

3.2 REVIEW OF CONTRACT DOCUMENTS AND FIELD CONDITIONS BY CONTRACTOR:

3.2.1 Add the Following:

“3.2.1.1 Examination of site shall include determination of the nature and scope of the work and all difficulties that accompany its execution. The Contractor shall be responsible for coordinating with the owner to inspect and locate existing site conditions and providing existing as built drawings for the following existing site items documented by GPS coordinates:

Valve and Valve Boxes, Main Water and Sewer tie-ins, Clean outs and Junction Boxes

Chilled Water Lines, main water lines, main gas lines and electrical conduits.

Existing change of directions for chilled water lines, main water lines, main gas lines, irrigation lines and electrical conduits.

Electrical Transformers.

3.2.3 Add the following:

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

“3.2.3.1 The Contractor, Subcontractors and material suppliers shall examine the Architectural, Structural, Mechanical, Plumbing, and Electrical Drawings and Specifications, and verify all measurements and requirements before ordering materials or performing any work to avoid problems during construction.

3.2.3.2 Before ordering materials or doing any work, the Contractor and Subcontractors shall verify all measurements at the project site and shall be responsible for their correctness. No extra compensation will be allowed on account of differences between actual dimensions and those indicated on the Drawings. Any decided difference which may be found shall be reported to the Architect in writing, for consideration before proceeding with the Work.”

3.3 SUPERVISION AND CONSTRUCTION PROCEDURES:

Add the following Subparagraph 3.3.2.1 through 3.3.2.7:

3.3.2.1 The Contractor and/or subcontractor and their employees shall refrain from use of vulgarities around students, staff and faculty.

3.3.2.2 Clothing shall have no vulgarities or sexually suggestive graphics.

3.3.2.3 Direct contact with students, faculty or staff is strictly prohibited.

3.3.2.4 Violation of Special Conditions may result in immediate termination of that employee, Contractor or Subcontractor.

3.3.2.5 State regulations prohibit alcohol, drugs, and firearms from being brought onto school property. Violators will be prosecuted under State Law.

3.3.2.6 Bay County School Board Policy states that there shall be no smoking or use of tobacco products which include e-cigarettes, allowed in any facility or on any real or personal property owned by or under the control of the Bay County School System. Contractor and Subcontractor employees are required to leave the school campus for tobacco use. Job-site trailers are not exempt from this requirement.

3.3.2.7 The Contractor shall present a plan, for approval by the Owner, showing all areas for safety fencing staging, storage, job office, ingress and egress to the site. No work shall be done until this is approved.

3.4 LABOR AND MATERIALS:

3.4.1 Add the following:

“3.4.1.1 Material Standards - Unless otherwise specifically provided in this Contract, reference to any equipment, material, article, or patented process, by trade name, make, or catalog number, shall establish a standard of quality and the Base Bid shall include only materials and items exactly as specified or called for by name. Architect to list at least three acceptable manufacturers in the Specifications, where possible, however each manufacturer shall meet the basis-of-design requirements.”

3.4.2 Delete subparagraph 3.4.2 and substitute the following:

“3.4.2 Substitutions During Bidding Period - Requests for Substitutions during the bidding period will be considered and treated only as stated in Specification Section 008200, Special Conditions, Article 15, Substitution of Materials and Equipment. Once bids have been received, the Owner and Architect will prepare the Contract on the basis that all items are those specified in the Specifications, shown on the Drawings, or approved in Addenda during the bidding period. The approval of a product during the bid period does not negate the requirement for the submission of complete data during the construction in accordance with the Section 013300, Submittals, nor does it negate the burden of complying with all specification requirements. Should further investigation of a product approved during the bid period indicate that the product does not meet the essential requirements of the project the Contractor and Subcontractors shall make such modifications as are necessary to meet these essential requirements.

3.4.2.1 Approval After Bids are Opened - Substitutions or approval of products will be considered after bids are opened only under the following conditions:

.1 The Subcontractor shall place orders for specified materials and equipment promptly upon award of Contract. No excuses or proposed substitutions will be considered for materials and equipment due to unavailability, unless proof is submitted that firm orders were promptly placed for the item listed in the Specifications.

.2 The reason for the unavailability shall be beyond the control of the Subcontractor, such as strikes, lockouts, bankruptcy, discontinuance of the manufacturer or a product, or acts of god, and shall be made known in writing to the Architect within ten (10) days of the date that the Subcontractor ascertains that he cannot obtain the material or equipment specified. Requests shall be accompanied by a complete description of the materials or equipment which the Subcontractor wishes to use as a substitute.”

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

3.5 WARRANTY:

Add the following:

“3.5.1 Under this warranty for a period of one (1) year from date of Completion, as evidenced by the date of "Substantial Completion" of the Work, the Contractor and Subcontractors shall remedy, at his own expense, any such failure to conform on any such defects. Where warranties are written in any Section for longer than one (1) year, such terms will apply.

3.5.2 Nothing in the above intends or implies that this warranty shall apply to work which has been abused or neglected by the Owner.”

3.6 TAXES:

Add the following:

“3.6.1 Unless otherwise specified, the Bid price includes all Federal, State and local taxes imposed prior to the execution of the Agreement and which are applicable to the Work. If any new privilege, sales gross receipt or other excise tax, exclusive of taxes and net income or undistributed profit applicable to the Work and payable by the Subcontractor is imposed by the State of Florida, or such present tax be increased as of the date thereof, then the Contract price will be adjusted accordingly and the Owner will reimburse the Contractor therefore without any allowance for overhead or profit upon separate payment application containing such pertinent details as the Owner may require. The Contractor will organize, implement and manage the Owner’s direct purchase tax recovery program. Direct purchases shall be for orders of five-thousand dollars (\$5,000) or more for any single item.”

3.7 PERMITS, FEES, NOTICES AND COMPLIANCE WITH LAWS:

3.7 Delete paragraph 3.7.1 and substitute the following:

“3.7.1 A local building permit will be required for this project. The "Florida Building Code 2023 shall govern. The Owner will engage a qualified Building Department to facilitate the document review and building permit process, as well as, related inspection services in accordance with the FBC. The Owner is exempt from all other county, district, municipal, and local building codes, ordinances, interpretations, building permits and assessments of fees for building permits, impact fees and service availability fees other than those defined within the Florida Building Code 2023, the Florida Statutes and the Florida Administrative Code. The Contractor and Subcontractors shall secure all required permits, governmental fees, anti-pollution fees, and licenses necessary for the proper execution and completion of his Work, which are applicable at the time the bids are received. The Contractor and Subcontractors shall be familiar with all Federal, State, and local laws, codes, ordinances, and regulations which in any manner effect those engaged or employed in the Work and any material or equipment used in the conduct of the Work.

3.7.1.1 Before proceeding with the Work, securing permits or necessary licenses, the Contractor and Subcontractors shall carefully study and compare the Drawings and Specifications and shall at once report in writing, to the Architect/Engineer, any error or omission he may discover that is in variance with applicable laws, statutes, building codes, and regulations.”

3.7.2 Add the following:

“3.7.2.1 The Contractor and Subcontractors at all times shall comply with the Florida Building Code 2023 installation requirements (including amendments and supplements), and all Federal, State and local laws, codes, ordinances and regulations as applicable, which in any manner affects the Work, and he and his surety shall indemnify and hold harmless the Owner, and Architect/Engineer, to the extent allowable by law, against any claim or liability arising from or based on the violation of such law or decree, whether by himself or his employees.”

3.10 CONTRACTOR’S CONSTRUCTION AND SUBMITTAL SCHEDULES:

Add the following Subparagraphs 3.10.5 through 3.10.7:

3.10.5 The Contractor shall furnish sufficient forces, construction plant and equipment, and shall work such hours, including night shifts and overtime operations, as may be necessary to insure the prosecution of the Work in accordance with the approved progress schedule. If the Contractor falls behind the progress schedule, the Contractor shall take such steps as may be necessary to improve the progress by increasing the number of shifts, overtime operations, days of work and the amount of construction plant, all without additional cost to the Owner.

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

3.10.6 Failure of the Contractor to comply with the requirements under this provision shall be grounds for determination by the Engineer that the Contractor is not prosecuting the work with such diligence as will insure completion within the time specified and such failure constitutes a substantial violation of the conditions of the Agreement.

3.10.7 Upon such determination, the Owner may terminate the Contractor's right to proceed with the work, or any separable part thereof, in accordance with Article 14 of the General Conditions, or may withhold further payments as indicated in Article 9.5.1.

3.11 DOCUMENTS AND SAMPLES AT THE SITE:

3.11.1 Add the following:

“3.11.1 At the completion of the Work, each Subcontractor shall submit "Record Drawings" to the Contractor on digital media, and the Contractor in turn will produce (or cause to have produced) As-Built Drawings on ELECTRONIC MEDIA on Autodesk AutoCAD Architectural Desktop (2019 Version). The Architect will provide the Contractor with the digital related AutoCAD files of the project for the Contractor's and Subcontractor's use to prepare Shop Drawings, Coordination Drawings, and As-Built (Record) Drawings upon receipt of accepted AIA Documents E203-2013 and G201-2013 Digital Protocol Agreements and the Architect's Digital File Release Forms from all users. Said Record Drawings shall be delivered to the Architect for review. The Architect will forward reviewed Final As-Built Drawings to the Owner for their future use.

3.11.1.1 Pipelines and ducts which are installed in furred spaces, pipe chases, or other spaces which can be readily inspected using access panels or other means of access will not be considered as being concealed. With reference to electrical and mechanical work the exact (not diagrammatic) conduit, pipe, and duct runs shall be shown on these drawings.

3.11.1.2 Record Drawings" shall be the daily in-use set of contract documents at the job site. At the end of each day, the foreman of each trade shall mark and date any and all changes that occurred during the day's work. Lines shall be located by dimension and equipment shall be noted and located. These documents will be delivered to the Contractor as noted in 3.11.1 above.

3.11.1.3 Upon completion of the work this data shall be recorded to scale, by a competent draftsman on electronic media copies of the contract drawings. Where changes and actual locations are to be recorded, the electronic media shall be erased before the changes are made. The work shall be shown as installed and the Contractor shall deliver the black line drawing prints and electronic media files with every drawing marked "As-Built". In showing the changes the same legend shall be used to identify piping, etc., as was used on the contract drawings. A separate set of drawings shall be prepared for electrical, plumbing, heating, air conditioning, and ventilating work, and A/V & Data, unless two (2) or more divisions are shown on the same sheets of the contract drawings. Each change of the original Contract Documents shall be "clouded" and referenced, except pipe runs may be noted, and each sheet shall bear the date and name of the Subcontractor submitting the changes to the drawings.

In addition, Contractor shall provide the following upon completion of the project:

- Electrical:
 - o Panel schedule to be verified by Engineer of Record
 - o On the Receptacle show label with Panel and Breaker
 - o On Main Panel label phase rotation
 - o Provide permanent Tag on Transformer for every main panel going to Transformer.
 - o Provide on every Panel and switchgear paired Transformer
 - o Provide the following standard color coding on J-Boxes:
 - Red – Fire Alarm
 - Yellow – 120/208/240 low voltage
 - Orange – 277/480 high voltage
 - Green – Camera
 - Blue – Communication/AV
- Plumbing:
 - o For Valve Boxes above Ceiling locations, provide orange/blue stencil at grid intersection nearest to Valve Box
- Mechanical:
 - o For Fire Damper, Air Damper locations provide pop-rivet sign
- Site As-Built drawings shall include the following:
 - o location of all existing valves and valve boxes by GPS coordinates

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

- location of all new valves and valve boxes by GPS coordinates.
- location of main sewer service tie in points by GPS coordinates.
- location of main water tie in points by GPS coordinates.
- location of clean outs and junction boxes by GPS coordinates.
- line drawings for chilled water lines, main water lines, main gas lines, Electrical lines.
- change of direction for chilled water lines, main water lines, main gas lines, electrical lines.
- Electrical Transformer location by GPS coordinates.

3.11.1.4 The Contractor shall review the complete as-built drawings. He shall ascertain and certify that all data furnished on the drawings are accurate and truly represent the work as actually installed. When manholes, boxes, underground conduits, plumbing, hot or chilled water lines, inverts, etc. are involved as part of the work, the Subcontractor shall furnish true elevations and locations, all properly referenced by using the original benchmark for the project. The “Record Drawings” from each Subcontractor, including those unchanged and changed, shall be submitted to the Architect, when completed, together with three (3) sets of black line prints (produced from the As-Built Electronic Media) with the Contractor’s stamp and each Subcontractor’s certification for forwarding to the Owner, at the time of Substantial Completion. Final payment shall not be made until said “As-Built” documents have been received by the Architect, reviewed and accepted as complete, and in accordance with the contract documents.

3.11.1.5 The Contractor shall be responsible for collecting, identifying, indexing and collating the specified Close-Out Documents including the following materials from the Subcontractors, and will deliver three (3) copies of the finished documents to the Architect. Complete equipment diagrams, operating instructions, maintenance manuals, parts lists, wiring diagrams, pneumatic and/or electrical control diagrams, test and balance reports, inspection reports, guarantee and warranties, as applicable for each and every piece of fixed equipment furnished under this contract to be supplied in a three ring binder, hard-cover book, properly indexed for ready reference. Also, specific information regarding manufacturer’s name and address, nearest distributor and service representative’s name and address, office and home phone numbers, make and model numbers, operating design and characteristics, etc. will be required. All information submitted shall be updated to reflect existing conditions. Final payment shall not be made until said documents have been received by the Architect/Engineer, reviewed and accepted as complete and in accordance with the contract documents. Also refer to Section 01 77 00, Close-Out Procedures.”

3.12 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES:

3.12.11 Add the following Subparagraph:

“3.12.11 The requirements of Article 3.12 are supplemented by a separate Section, Submittals in Division One, Section 013300.”

3.14 CUTTING AND PATCHING OF WORK:

3.14 Add the following Subparagraphs:

“3.14.3 The Subcontractor shall do all cutting required for installation of his work. Patching required because of such cutting shall be performed as follows:

3.14.3.1 Wherever cutting occurs within unexposed materials, or in materials which are to remain unfinished when completed, patching shall be performed by the Subcontractor who did the cutting. This includes all concrete and masonry other than listed below.

3.14.3.2 Wherever cutting occurs in finished surfaces, patching shall be performed by the Subcontractor specializing in that particular trade, and paid for by the Subcontractor who did the cutting. This includes, but is not limited to, roofing, painting of plaster and finished surfaces, ceramic tile, structural facing tile, marble, concrete block in finished areas, metal lath and plaster, acoustical materials and their supports.”

ARTICLE 4 - ARCHITECT:

4.1 GENERAL:

4.1 Add the following paragraph:

“4.1.4 Disputes arising under Subparagraph 4.1.2 and 4.1.3 shall be subject to litigation.”

ARTICLE 5 - SUBCONTRACTORS:

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

5.1 DEFINITIONS:

5.1. Add the following:

“5.1.3 Material Supplier is a person or organization who has furnished materials to the General Contractor, Subcontractor, Sub-subcontractor or Owner to be used in the construction of the Work, a building or structure, but has not performed any on or off site work other than delivering construction materials, and shall not have or created any contractual relation between the Owner or the Architect/Engineer.

5.1.4 The Contractor, and all Subcontractors, Sub-Subcontractors and Material Suppliers shall be responsible for reading, studying, and understanding the Conditions of the Contract, Drawings and Specifications.”

ARTICLE 6 - CONSTRUCTION BY OWNER OR BY SEPARATE CONTRACTORS:

6.4 Add the following paragraph:

“6.4 INSTALLATION OF EQUIPMENT:

6.4.1 The Contractor and Subcontractors shall allow the Owner to take possession of the use of any completed portions of this structure or Work, or to place and install as much equipment and machinery during the progress of the Work, as is possible without interference before its entire completion. Such possession and use of structure of work or such placing and installation of equipment, or both, shall not in any way evidence the completion of the Work or any portion of it, or signify the Owner's acceptance of the Work or any portion of it.”

ARTICLE 7 -CHANGES IN THE WORK:

7.2 CHANGE ORDERS:

7.2 Add the following:

“7.2.2 The Contractor is responsible for all affected work that is a result of an approved Change Order. Any changes required as a result of a Change Order shall be reflected in the price of the Change Order. Any additional work that becomes necessary after the Change Order has been approved will be made at the Contractor's expense.”

7.3 CONSTRUCTION CHANGE DIRECTIVES:

7.3.3 Delete paragraph and substitute the following:

“7.3.3 The cost or credit to the Owner resulting from a change in the Work shall be determined as follows:

1. By Unit Prices stated in the Contract Documents or subsequently agreed upon; or for changes not covered by Unit Prices;
2. By mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation; or if no agreement can be reached,
3. By the method provided in Subparagraph 7.3.6.

The lump sum proposals shall be based upon:

1. Estimate of Labor.
2. Estimate of Materials.
3. Estimate of Applicable Taxes.
4. Estimate of Equipment Rentals.
5. Estimate of Subcontractor Costs.
6. Estimate of Contractor Costs.
7. Estimate of Field Supervision (directly attributed to change) shall be included in labor breakdown.
8. Cost of Bond Premium.
9. Contractor and Subcontractor overhead and profit applied to the above items shall not exceed fifteen percent (15%) percent in total. Subcontractor overhead and profit shall not exceed ten percent (10%). Contractor overhead and profit shall not exceed five percent (5%) plus the cost for related bond premium. All lump sum proposals shall include a detailed cost breakdown for each component of work indicating both quantities and unit prices shall be submitted to the Architect within seven (7) calendar days after receipt of the proposal request.”

7 3.7 Add the following:

“7.3.7.1.1 All labor, material, and equipment expenditures for work performed at actual cost shall be approved daily by the Construction Manager. Material invoices shall be presented to the Owner and Architect with all payment requests.

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

7.3.7.1.2 No amount or percentage of overhead and profit will be allowed on items of perks, fringe benefits, bonuses, retirement benefits (other than social security withholdings), or health and life insurances.”

ARTICLE 8 - TIME:

8.2 PROGRESS AND COMPLETION

8.2 Add the following paragraph:

“8.2.4 Work shall be commenced by the date established in the Notice to Proceed, but in no case more than ten (10) consecutive calendar days after such date, and shall proceed in accordance with a schedule to be developed by the Contractor and presented to the Architect and the Owner’s Agent. The Contract Time is specified in the Agreement Between Owner and Construction Manager.

A. LIQUIDATED DAMAGES:

1. If the Contractor fails to achieve Substantial Completion of the Work within the Contract Time or as otherwise required by the Contract Documents, the Owner shall be entitled to retain or recover from the Contractor and/or its Surety, liquidated damages and not as a penalty, the per diem amounts specified in the Contract Between the Owner and Construction Manager, and commencing upon the first day following expiration of the Contract Time and continuing until the actual date of Substantial Completion for each Phase of Work identified. Such liquidated damages are hereby agreed to be a reasonable pre-estimate of damages the Owner would incur as a result of delayed completion of the Work.
2. The Liquidated Damages amount per calendar day are fixed and agreed upon by and between the Contractor and the Owner because of the impracticality and difficulty of ascertaining actual damages the Owner will sustain. The Owner will suffer financial damage if the Project is not substantially completed on the dates set forth in the Contract Documents. Therefore, it is agreed that the liquidated damages amount per calendar day is adequate to cover damages which the Owner will sustain by reason of the inconvenience, loss of use, loss of monies, additional costs of contract administration by the Architect and Owner.
- 3.
4. Permitting the contractor to continue and finish the Work or any part of the Work after time fixed for its completion or after date to which time for completion may have been extended shall in no way constitute a waiver on the part of the Owner of any of his rights under the Contract.
- 5.
6. Liquidated Damages shall also be assigned to the Contractor if punch list items have not been completed within the specified number of days after Substantial Completion. Liquidated Damages for punch list items shall commence on the after Substantial Completion is established and accrue until the final Application for Payment has been approved by the Architect. The Contractor, and its Surety, shall pay to the Owner the sums stipulated as fixed, agreed and liquidated damages for each calendar day of delay until the punch list items are complete.”

ARTICLE 9 - PAYMENTS AND COMPLETION:

9.5 DECISION TO WITHHOLD CERTIFICATION:

9.5 Add the following:

“9.5.4 The Architect may withhold or cause to be withheld, from any monies payable on account for work performed by the Contractor, or Subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or Subcontractors for damages.”

9.10 FINAL COMPLETION AND FINAL PAYMENT:

9.10.2 Add the following paragraph:

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

“9.10.2.1 Final payment consisting of the entire unpaid balance of the Contract Amount will be paid by the Owner to the Contractor thirty (30) days after receipt of the Final Certificate for Payment from the Architect, Close-Out Documents including Record Drawings, and the “Final Consent of Surety. Final Payment will not be made until all Close-Out Documents and As-Built Drawings have been submitted and approved.”

ARTICLE 10 - PROTECTION OF PERSONS AND PROPERTY:

10.2 SAFETY OF PERSONS AND PROPERTY:

10.2.2 Add the following subparagraph:

“10.2.2.1 This requirement shall include, but not necessarily be limited to, all health, safety, and fire protection regulations of the Florida Industrial Commission and the Department of Labor Safety and Health Regulations and construction promulgated under the Occupational Safety and Health Act of 1970 (P191-596) and under Section 107 of the Contract Work Hours and Safety Standards Act (P191-54). These regulations are administered by the Department of Labor who shall have full access to the Project for inspection, etc. Compliance with the above is strictly and exclusively the responsibility of the Contractor and Subcontractors and shall in no event be considered reason for additional time or monetary compensation. In the event that a hurricane or storm emergency is imminent, the Subcontractor shall, at his own expense and without cost to the Owner, take all necessary measures to secure all his movable property, building work or plant in such a manner that no damage to public or private property or to persons may result by reason of displacement of the Subcontractor's material, equipment or plant during such hurricane or storm.”

10.2.7 Add the following subparagraph:

“10.2.7.1 The Subcontractor shall adequately protect preceding and existing Work from damage caused by his operations. Breakage or damage shall be repaired by the erector of the Work at cost to the party causing the damage. The Construction Manager shall be the sole judge determining the party causing the damage, notwithstanding any dispute resolution.”

ARTICLE 11 INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

Delete Subparagraph 11.1.1 and substitute the following:

11.1.1 The Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in the State of Florida such insurance as will protect the Owner, Contractor, Architect and Architect's consultants from claims set forth below which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations be by the Contractor or by a Subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable. All insurance policies shall be issued and countersigned by representatives of such companies duly authorized for the State of Florida and shall be written on ISO standard forms or their equivalents. The Contractor shall provide the ISO Commercial General Liability policy for general liability coverages. All liability policies shall provide that the Owner, Bay County School Board, is a named additional insured (being named as Certificate Holder is not acceptable) as to the operations of the Contractor under the Agreement and shall provide the Severability of Insured's Provision. The Owner shall be exempt from, and in no way liable for, any sums of money which may represent a deductible in any insurance policy. The payment of such deductible shall be the responsibility solely of the Contractor and/or Subcontractor providing such insurance. This insurance shall protect the Contractor from the following claims:

- .1 claims under workers' or workmen compensation, disability benefit and other similar employee benefit acts which are applicable to the Work to be performed;
- .2 claims for damages because of bodily injury, occupational sickness or disease, or death of the Contractor's employees;
- .3 claims for damages because of bodily injury, sickness or disease, or death of any person other than the Contractor's employees;

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

.4 claims for damages insured by usual personal injury liability coverage including claims which are sustained (1) by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor, or (2) by another person;

.5 claims for damages, other than to the Work itself, because of injury to or destruction of tangible property, including loss of use resulting therefrom;

.6 claims for damages because of bodily injury, death of a person or property damage arising out of ownership, maintenance or use of a motor vehicle; and

.7 claims involving contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18.

Delete Subparagraph 11.1.2 and substitute the following:

11.1.2 The insurance required by Subparagraph 11.1.1 provides Coverages, whether written on an occurrence or claims-made basis, that shall be maintained without interruption from date of commencement of the Work until date of final payment and termination of any coverage. The Contractor shall purchase and maintain the required bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located. Insurance must be maintained for one (1) year after final payment. The insurance required by Subparagraph 11.1.1 shall include contractual liability insurance applicable to the Contractor's obligations under Paragraph 3.18 and coverage for the "XCU" exposure. The amounts set forth herein and by Law shall apply equally or whether on or off the site of the Work.

11.1.2.1 Contractor's Liability: Shall include Comprehensive General Liability, Premises and Completed Operations, Contractual Liability and Broad Form coverage.

- a. Bodily injury in at least the amounts of \$1,000,000 per occurrence, with an Aggregate of \$2,000,000.
- b. Property damage, including Complete Operations and Broad Form: in at least the amount of \$2,000,000 per occurrence, with an Aggregate of \$1,000,000.
- c. Personal Injury (with the employment exclusion deleted) in at least the amounts of \$1,000,000 per occurrence, with an Aggregate of \$2,000,000.

11.1.2.2 Worker's Compensation: The Contractor shall secure and maintain for the life of this Agreement, valid Worker's Compensation Insurance as required by Chapter 440, Florida Statutes. Copies of the insurance policy shall be filed with the Owner no later than 60 days after execution of the Owner-Contractor Agreement. All subcontractors shall maintain valid Worker's Compensation Insurance as required by Florida Statutes.

- a. Applicable Per Florida Statute – Chapter 440
- b. Railroad Required NO
- c. Maritime Required NO
- d. Employer's Liability \$2,000,000

11.1.2.3 Motor Vehicle Liability (Owned, Non-owned and Hired): The Contractor shall secure and maintain, during the life of this Agreement, Motor Vehicle Liability insurance on all vehicles for the following:

- a. Bodily injury in at least the amounts of \$1,000,000 per occurrence, with an Aggregate of \$1,000,000.
- b. Property damage in at least the amount of \$200,000 per occurrence, with an Aggregate of \$400,000.

11.1.2.4 Owner and Contractor's Protective Liability: The Contractor shall provide an Owner's and Contractor's Protective Liability Policy with the following limits: (A separate policy in the name of the Owner must be provided.)

- a. Bodily injury in at least the amounts of \$1,000,000 per occurrence, with an Aggregate of \$1,000,000.
- b. Property damage in at least the amount of \$1,000,000 per occurrence, with an Aggregate of \$1,000,000.
- c. Personal Injury in at least the amounts of \$1,000,000 per occurrence, with an Aggregate of \$1,000,000.

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

- d. Optionally, the Owner may purchase and maintain other insurance for self-protection against claims which may arise from operations under the Contract

11.1.2.5 Public Liability: Shall include Comprehensive General Liability and Products and Completed Operations Liability coverage against bodily injury, personal injury and property damage, in limits as specified.

Delete Subparagraph 11.1.3 and substitute the following:

11.1.3 Two (2) Certificates of Insurance acceptable to the Owner shall be filed with the Owner prior to commencement of the Work. These Certificates and the insurance policies required by this Paragraph 11.1 shall contain a provision that coverages afforded under the policies will not be canceled or allowed to expire until at least 30 days' prior written notice has been given to the Owner; this shall be noted on the Certificates of Insurance. The foregoing insurance coverages are required to remain in force for one (1) year after final payment if written on a claims-made basis; therefore an additional certificate evidencing continuation of such coverage shall be submitted with the final Application for Payment as required by Subparagraph 9.10.2. The Contractor shall furnish one copy each of Certificates of Insurance for each copy of the Agreement which shall specifically set forth evidence of all insurance coverage required by the Contract Documents. The Certificate of Insurance shall be dated and show the name of the insured Contractor, the specific job by name and job number, the name of the insurer, the number of the policy, its effective date, and its termination date. The Contractor shall furnish a copy of the insurance policy to the Owner within 30 days following execution of the Agreement. The Supplemental Attachment form, AIA document G715 shall be completed, signed by the Contractor's insurance representative and attached to the Acord certificate. Furnish to the owner a letter from the insurance company stating that all required insurance has been complied with as specified.

The Supplemental Attachment, The American Institute of Architects' (AIA) Document G715 is included at the end of this section.

11.2 OWNER'S INSURANCE

Add the following Subparagraph 11.2.1.1:

11.2.1.1 Bay District Schools will provide Builder's Risk Insurance.

11.3 WAIVERS OF SUBROGATION

Add Subparagraphs 11.3.3 to 11.3.5:

11.3.3 Partial occupancy or use in accordance with Paragraph 9.9 shall not commence until the insurance company or companies providing property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Owner and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse or reduction of insurance.

11.3.4 The Owner and Contractor waive all rights against each other for damages caused by fire or other perils to the extent covered by insurance provided under this paragraph, except such rights as they may have to the proceeds of such insurance held by the Owner as trustee. The Contractor shall require similar waivers by Subcontractors and Sub-subcontractors.

ARTICLE 13 - MISCELLANEOUS PROVISIONS:

13.1 GOVERNING LAW:

13.1 Add the following:

“13.1.1 The Contractor and Subcontractors shall comply with all applicable provisions of the Florida Building Code 2023 (with latest supplements), Florida Fire Prevention Code 2023, applicable portions of the Florida Administrative Code, federal, state, and local law. All limits or standards set forth in this contract to be observed in the performance of the project are minimum requirements and shall not affect the application of more restrictive standards to the performance of the project.”

SECTION 008000 – SUPPLEMENTARY GENERAL CONDITIONS (continued)

“13.1.2 The Contractor and Subcontractors shall comply with the Owner’s personnel background check and badging of all on-site personnel. Refer to Section 00 98 00, Background Check.”

ARTICLE 15 - CLAIMS AND DISPUTES:

15.2 INITIAL DECISION:

15.2 Delete Paragraphs in its’ entirety and substitute the following:

“15.2.1 “Any claim, dispute or other matter in question between the Contractor, Subcontractor and the Owner, shall be referred to the Initial Decision Maker (the Architect will serve as the Initial Decision Maker unless otherwise indicated in the agreement), except those relating to artistic effect, and except those which have been waived by the Owner’s acceptance, shall be subject to litigation at instance of the aggrieved party. However, no litigation of any such claim, dispute or other matter may be commenced until the earlier of (1); the date on which the Initial Decision Maker had rendered a written decision, or (2); the tenth (10) day after the parties have presented their evidence to the Initial Decision Maker, or have been given a reasonable opportunity to do so, if the Initial Decision Maker has not rendered his written decision by that date. When such a written decision of the Initial Decision Maker states (1); that the decision is final, but subject to appeal, and (2); that any litigation of a dispute or other matter covered by such decisions must be filed before Final Completion by the party making the demand and received the written decision. Failure to commence litigation within said period will result in the Initial Decision Maker's decision becoming final and binding upon the Contractor, Owner and the Subcontractor.”

ARTICLE 17 - EQUAL OPPORTUNITY:

ADD the following Article:

“17.1 The Contractor shall maintain policies of employment compliant with Executive Order #11246 as follows:

17.1.1 Neither the Contractor or any Subcontractors shall discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, or age. Such action shall include, but not be limited to the following: employment, upgrading, demotion or transfer, recruitment or advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor and Subcontractors agree to post in conspicuous places, available to employees and applicants of employment, notices setting forth the policies of non-discrimination.

17.1.2 The Contractor and all Subcontractors shall, in all solicitations advertisements for employees placed by them or on their behalf, state that all qualified applicants will receive consideration for employment without regard to race, religion, color, sex, national, origin, or age”

END OF SECTION 00 80 00

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 008200 – SPECIAL CONDITIONS

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Attachment: Certificate of Substantial Completion Form
Attachment: Certificate of Contract Completion Form
Attachment: Warranty-Guarantee Form

PART I - GENERAL REQUIREMENTS:

These Special Conditions are hereby made a part of every Section of these Specifications and shall be binding upon each Contractor, Subcontractor, and Material Supplier.

ARTICLE 1: PERMITS AND FEES:

- A. Building Permit: A local building permit is required for this project. The Owner shall obtain and pay for all required approvals and inspections for the building. The Contractor, Subcontractors, and Suppliers shall cooperate with the Owner in obtaining required approvals and inspections.
- B. Utility service connection fees (if required) and required utility service fees, if any, will be coordinated by the Contractor and paid for by the Owner.
- C. Other Permits and Fees: Other than as noted above, the Contractor shall assist in obtaining and arranging for payment for all other permits, assessments, fees, bonds, and other charges as necessary to perform and complete the work of this contract, including any related inspection fees, in accordance with the contract between the Owner and the Contractor.
- D. The Contractor and Subcontractors will be subject to all applicable County and local Municipal Occupational License Fees and Taxes.

ARTICLE 2: PROJECT SIGNS:

- A. The Contractor will provide the project sign(s) as designed by the Architect and approved by the Owner. The signs will be ONE (1) 4' x 8' professionally painted (or digital printed and mounted) plywood signs indicating the Architect, Contractor and the Owner. Location to be as directed by the Owner's Representative. No other signs or advertising shall be displayed on the premises without the

SECTION 008200 – SPECIAL CONDITIONS (continued):

approval of the Owner. This does not exclude the posting of required trade notices and cautionary signage by the Contractor or the Subcontractors. Directional signage indicating construction entrances, contractor parking, and other miscellaneous information shall be provided as required by the Contractor.

- B. See SECTION 01 50 00 – PROJECT SIGN for additional requirements.

ARTICLE 3: LAYOUT OF WORK:

- A. All work, and in particular piping, ducts, conduit, and similar items, shall be neatly and carefully laid out to provide the most useful space utilization and the most orderly appearance. Except as otherwise indicated or directed, piping and similar work shall be installed as close to ceilings and walls as conditions reasonably permit, located to prevent interference with other work or with the use of the spaces in the manner required by the functions of the space as determined by the Construction Manager, Owner and Architect. Valves and clean-outs shall be located in inconspicuous but accessible locations and shall be field verified before proceeding with any work where exposed to view. The Contractor and Subcontractors shall carefully plan the layout and review any questionable installations with the Contractor and the Architect.
- B. Refer to Section 01 31 00, Project Management and Coordination, for required Coordination Drawings.

ARTICLE 4: TEMPORARY FENCING AND SECURITY:

- A. A temporary fencing enclosure WILL BE required for the duration of the construction period. The temporary fencing may need to be modified by the Contractor for the various phases of construction. Fencing screen will be required on any fencing facing an occupied school campus.
- B. The services of a watchman will NOT be provided by the Owner or the Architect. The Contractor shall be responsible for, and make good, any loss due to theft or vandalism during construction for any claim not covered by Builder's Risk Insurance.
- C. Subcontractors shall advise the Contractor and the Architect of any theft or damage which might delay the execution of the Work.
- D. See SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS for additional requirements.

ARTICLE 5: MATERIAL STORAGE:

- A. Each Subcontractor shall provide sufficient protection for his materials and equipment from damages by weather or construction work, or theft. Location shall be coordinated and approved by the Contractor. During progress of work on a daily basis and upon completion of the work, remove all debris and leave the area in a clean and orderly condition.
- B. See SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS for additional requirements.

ARTICLE 6: TEMPORARY TOILET FACILITIES:

- A. The Contractor will obtain and maintain sanitary temporary toilet facilities acceptable to the local Health Department for use by all crew and workmen.
- B. Contractor and Subcontractors will not have access to existing toilet facilities within this facility or the adjacent buildings for the use of his crew and workmen.
- C. See SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS for additional requirements.

ARTICLE 7: USE OF PREMISES, BARRICADES AND PROTECTION:

- A. Subcontractors shall be subject to such rules and regulations for the conduct of the Work as the Contractor, Owner or Architect may establish.
- B. Before entering upon the Work, ascertain from the Contractor, as approved by the Owner and Architect, what entrances, routes, or roadways shall be used for access to the work, and use only the entrance, routes, and roadways designed for movement of personnel, materials, and vehicles to and from the work.

SECTION 008200 – SPECIAL CONDITIONS (continued):

- C. Contractor shall provide and maintain in good repair barricades, fences, overhead protection, guard railings, etc., as required by law or necessary for the protection of the public and personnel engaged in the Work from hazards incidental to this contract. Take reasonable precautions necessary to protect Owner's employees, the public, and workmen from injury or damage to vehicles or other property.
- D. Whenever the Contractor intends to depart from the normal work hours, he shall notify the Owner and the Architect at least twenty (20) hours in advance. Failure of the Contractor to give such timely notice may be cause for the Architect to require the removal or uncovering of the Work performed during such time without the knowledge of the Architect but is subject to the approval of the Owner.
- E. Protect pavement, curbs, and all existing construction and improvements during the course of the Work and repair all parts of same which become damaged. Contractor and each Subcontractor shall be responsible for the necessary cleaning and repairing of adjacent streets and other improvements resulting from his operations.
- F. Each Contractor and Subcontractor shall be responsible for all damage to the Owner's property and this project due to his operations. Repair or replacement of damaged items shall be to the satisfaction of the Owner and the Architect.
- G. Provide and maintain proper shoring and bracing for existing underground utilities, sewers, and building foundations, encountered during excavation work to protect them from collapse or movement, or other type of damage until such time as they are removed or repaired, incorporated into the new work, or can be properly backfilled upon completion of new work.
- H. Maintain clearances adjacent to and in connection with the work performed.
- I. The Contractor and each Subcontractor shall effectively confine dust, dirt, and noise to the actual construction areas.
- J. All employees and people on-site shall maintain procedures as stated in the Contractor's safety program.
- K. Each Subcontractor shall assume full responsibility for the protection and safekeeping of products under his control which are stored on the site. Subcontractors must move any stored products, under Subcontractor's control, which interfere with operations of the Contractor, Owner or other Subcontractors as directed by the Contractor.
- L. Contractors and Subcontractors must also obtain and pay for use of additional storage or work areas needed for his operations. The Contractor shall receive from each Subcontractor, a receipt of shipment for all materials and equipment stored on-site (or off-site if approved). No materials or equipment shall be removed from the site without the permission of the Contractor and the Owner. No materials may be stored off-site unless approved in writing by the Contractor, Architect and Owner.
- M. Contractor and each Subcontractor shall not load or permit any part of a structure to be loaded with a weight that will endanger its safety, or the safety of persons or property.
- N. All employees of the Contractor and Subcontractors shall conduct themselves in a proper manner. Any disruptive behavior by any employee will cause that employee to be barred from the construction site and the Owner's property. The use of AM/FM radios is prohibited. Animals are not allowed on the property.
- O. All pumping, bailing, or well point equipment necessary to keep excavations and trenches free from the accumulation of water during the entire progress of this work shall be the responsibility of the Contractor performing said excavations and trenches due to their scope of work. Dispose of water in such a manner as will not endanger public health or cause damage or expense to public or private property. Abide by the requirements of any public agencies having jurisdiction.
- P. Contractor shall prepare a Safety Plan which clearly delineates areas for construction, safety barriers, exits, construction traffic during the various phases of the project prior to initiating construction. Contractor to submit the Plan to the Architect and Owner.

ARTICLE 8: TEMPORARY FIELD OFFICES FACILITIES AND PARKING:

- A. The Contractor, Owner and the Architect will designate an area for construction trailers (if required), equipment and parking for all construction workers. Placement and schedule shall be coordinated with the Contractor.
- B. Contractor shall provide a temporary field office with a meeting room of adequate size, and other temporary buildings as may be necessary for his operations as approved by the Owner. Storage and maintenance facilities shall be as required in accordance with the local Fire Marshall having jurisdiction. The Contractor shall arrange for the temporary electrical service and other utilities in his

SECTION 008200 – SPECIAL CONDITIONS (continued):

- area for their use.
- C. The Contractor and/or Subcontractors shall maintain his designated space for office and sheds if provided. This includes removal of weeds, debris, and trash. Clean and restore space at completion of the work.
- D. Field offices and sheds shall not be used for living quarters.
- E. Offices and sheds, when provided, shall be of suitable and safe design, maintenance, and appearance. Temporary facilities shall be securely anchored to the ground to resist wind speed at the specific site of construction.

ARTICLE 9: COOPERATION - DISPUTES:

- A. The completion of the Project within the described time is dependent upon the close and active cooperation at all those engaged therein. Therefore, it is expressly understood and agreed that the Contractor and Subcontractors shall lay out and install his work at such time, and in such manner as not to delay or interfere with the carrying forward of the work of others, and as directed by the Contractor.
- B. In the event of any dispute arising as to possible or alleged interference between the various Subcontractors, which may retard the progress of the Work, the same shall be adjusted by the Contractor.

ARTICLE 10: CLEANUP:

- A. Contractor and Subcontractors shall be responsible for clean-up. Each Contractor shall clean their respective work areas on a daily basis as a minimum.

ARTICLE 11: QUALITY CONTROL:

- A. It is the Contractor's and the Subcontractor's responsibility to familiarize himself with all required tolerances and quality assurance clauses, which are a part of the Contract Documents. It is also the Contractor's and the Subcontractor's responsibility to reject or condemn work performed by his forces or the Sub-Subcontractor's forces which does not comply with the requirements set forth in the Contract Documents, or as required by law, codes, etc. NOTE: If a conflict appears between the tolerances and quality assurance of published industry standards and the requirements of the Contract Documents, the Contract Document requirements will govern.
- B. The Owner, Engineer and Architect will conduct periodic observations of the Work as it progresses. Should the Owner, Engineer or the Architect reject any portion of the Work, he will promptly notify the Contractor with a Notice of Non-Conformance/Rejected Work. The Contractor will immediately provide the responsible Subcontractors with a Notice of Non-Conformance/Rejected Work and upon receipt of such notification shall, within 48 hours, inform the Contractor, Owner and Architect of his intended plan of action.
- C. The Contractor and Subcontractors should be aware that no monies will be awarded against defective work until such work is completed in a manner satisfactory to the Owner and Architect. In addition, the A/E, depending on the extent of the rejected work, may decide to withhold additional monies to compensate for the projected cost of repairs.
- D. In the event a Subcontractor fails to cooperate in the coordination program, he will be held responsible for all costs incurred for adjustments to the work of others made necessary to accommodate the uncooperative Contractor's installations.
- E. When a change order request is issued, the affected Subcontractors shall review the Coordination Drawings and bring to the attention of the Contractor any revisions necessary to the work of others not directly affected by the change order.

ARTICLE 12: CHANGES TO THE WORK:

- A. During the course of the Contractor's and Subcontractor's performance of the work necessary to complete the subject Project, certain events may occur which have the effect of changing the conditions under which the work is to be performed as specified and described in the Bidding Documents and/or the nature and extent of the work as specified and described in the Contract

SECTION 008200 – SPECIAL CONDITIONS (continued):

Documents.

- B. The occurrence of such events may cause the Contractor and Subcontractors to incur greater or less cost and expense to perform the work required to complete the subject Project. The Contractor, Subcontractor(s) or the Owner shall respectively be entitled to either an increase or decrease in the Contract Sum, whichever is the case. The changes shall be made as documented in Section 00 70 00, AIA A201 General Conditions and Section 00 80 00 Supplementary General Conditions.

ARTICLE 13: PRIORITY:

- A. In case of close quarters for installation of mechanical and electrical systems, and in the absence of instructions to the contrary, the following order or precedence shall be followed:
 - 1. Special Equipment - Electric Devices
 - 2. Light Fixtures
 - 3. Sheet Metal Duct Work
 - 4. Plumbing Work, including fire protection piping
 - 5. Mechanical Work, including electrical and A/C pipes
 - 6. Electrical Work
 - 7. Control System
- B. **After award of contracts and prior to start of construction the Contractor will schedule a meeting with the Contractors responsible for the work items listed above.** The purpose of the meeting will be to introduce the coordination program and to determine its implementation in relation to the progress schedule.
- C. At the initial coordination meeting, the Contractor will provide to the HVAC and Electrical Contractors the drawings for the building on ELECTRONIC MEDIA in Autodesk ACAD Architectural Desktop (2019 Version). The Architect will provide the Contractor with the digital files of the building for the Contractor's and Subcontractor's use to prepare Shop Drawings, Coordination Drawings, and As-Built Drawings upon receipt of accepted AIA Documents E203-2013 and G201-2013 Digital Protocol Agreements and the Architect's Digital File Release Forms from all users. **The HVAC and Electrical Contractors, with reference and consideration to the structural, mechanical, electrical, fire protection, plumbing, and reflected ceiling plans, shall draw to scale, his proposed installation showing duct sizes, equipment layouts, and dimensions from column lines and from finished floors to bottom of ducts. Ductwork shall be maintained as tight as possible to the underside of floor slabs and/or beams.** In congested areas, the HVAC Contractor shall, in addition, prepare drawings in section view. During this phase of the program, it shall be the Electrical Contractor's and the Fire Protection System Contractor's responsibility to furnish the HVAC Contractor with recessed lighting and sprinkler installation and clearance requirements. This information shall be outlined on the drawings by the HVAC Contractor. Also refer to Section 01 31 00, Project Management and Coordination for the required Coordination Drawings.
- D. In the event a Subcontractor fails to cooperate in the coordination program, he will be held responsible for all costs incurred for adjustments to the work of others made necessary to accommodate the uncooperative Contractor's installations.
- E. When a change order request is issued, the affected Subcontractors shall review the Coordination Drawings and bring to the attention of the Contractor any revisions necessary to the work of others not directly affected by the change order.

ARTICLE 14: COOPERATION WITH PUBLIC SERVICE COMPANIES:

- A. Contractors shall notify the appropriate persons within local utilities 48 hours before commencement of any work, to verify location of existing below grade pipes, cables, poles, towers, and right-of-ways that could be hazardous to life, limb, health or property. The Contractors will be held solely responsible for any injury, damage to existing utilities, or damaged property.

ARTICLE 15: SUBSTITUTION OF MATERIALS AND EQUIPMENT:

- A. All bids submitted shall be based on materials, equipment, and apparatus of the quality and make specified. The Architect will include at least three (3) approved manufacturers, as reasonably possible, but the manufacturers shall comply with the basis-of-design specifications. The Bidder's attention is directed to Section 255.04, Florida Statutes, which requires that on public building

SECTION 008200 – SPECIAL CONDITIONS (continued):

contracts, Florida products and labor shall be used wherever price and quality are equal. However, Bidders wishing to obtain approval of an article, device, product, material, fixture, form, or type of construction other than specified or shown by name, make, or catalog number, shall make written request to the Architect timed so as to reach the Architect at least seven (7) working days prior to the date of receipt of bids. Such requests shall be accompanied by data supporting the claim to equality or equivalence.

- B. "Or Equal": The Contractor and Subcontractors shall not decide that another product is equal or equivalent to the brand, or model specified. The Architect is solely charged with this responsibility and judgment. Where "or equal" is stated in the Specifications, it is the Architect/Engineer's and not the Contractor's or Subcontractor's decision as to what brands or suppliers qualify as equal, or equivalent, or do not qualify as equal or equivalent.
- C. The Bidder shall submit drawings and other descriptive data of any modification, or items of assemblies, necessary to provide approved compliance with requirements and compatibility with adjacent components.
- D. Approval by the Architect, if given, will be made by Addendum. Said approval will indicate that the additional article, device, product material, fixture, form, or type of construction is approved for use insofar as the requirements of this Project are concerned. However, it is the responsibility of the Contractor to ensure that the approved item meets all requirements of the Contract. Bids shall not be based on assumed acceptance of any item which has not been approved by Addendum or specified herein. If a substitute item is bid without prior written approval, the Architect holds the option to void that bid, or require that the work be incorporated as specified at no additional cost to the Owner or Architect.
- E. Under no circumstance will the Architect/Engineer be required to prove that a product proposed for substitution is, or is not, equal or equivalent quality to the product specified. It is mandatory that the Bidder submit a complete description of the proposed substitute, the name of the material or equipment for which it is to be substituted, drawings, cuts, performance and test data, and any other data, samples or information necessary for a complete evaluation. Insufficient data will not be considered.
- F. Where more than one (1) manufacturer's product is listed, the listing is not necessarily in order of preference, and all will be considered as equally acceptable as long as they meet the design requirements of the Contract Documents and as determined by the Architect/Engineer.
- G. The Contractor shall provide the same guarantee for an approved substitution, if approved, that is originally required for the originally specified product.

ARTICLE 16: FASTENING DEVICES:

- A. All exposed screw and bolt heads in secure spaces throughout the interior of the Project (this specifically excludes mechanical and electrical rooms) shall comply with the following:
 - 1. Any item which requires periodic access for maintenance shall have "spanner-head" fastening devices, or approved equal, which enables removal of the fastener with appropriate special tools.
 - 2. All exposed fastening devices shall be of tamper-proof design, where ever possible, as approved by the Architect/Engineer.
 - 3. All exterior fasteners shall be stainless steel unless otherwise specified by individual Sections.

ARTICLE 17: PROJECT CLOSE-OUT/DOCUMENTS:

- A. The Contractor and each Subcontractor shall be responsible for collecting, identifying, and collating the following materials, as applicable to his portion of the Work, and shall submit the same (in duplicate) to the A/E. The Contractor, shall properly organize the materials from himself and the various Contractors and Subcontractors into hard cover, 3-ring binders, and shall deliver copies of the finished books to the A/E for verification. The Architect/Engineer will deliver the approved copies to the Owner for approval. This process, together with the As-Built Drawing requirements, must be completed before the Final Certificate for Payment will be issued by the Architect.
- B. INDEXING: All information shall be organized with categories indexed as per the project close-out index. The individual categories shall also be organized and indexed as per Section of the Specifications.

C. LISTING OF CONTRACTOR AND SUB-CONTRACTORS: The Contractor shall provide a listing of

SECTION 008200 – SPECIAL CONDITIONS (continued):

all Sub-Contractors performing work on the site. Required information shall be as follows:

(Example)
Division 1
CM / Contractor Representative's Name
Company Name
Title
Address
Phone Number
Facsimile Number

Division 2
Earth Moving and Site Grading
Representative's Name
Title
Company Name
Phone Number
Address
Facsimile Number

- D. CERTIFICATE OF SUBSTANTIAL COMPLETION: The Contractor shall insert, at this point, a copy of the fully executed Certificate of Substantial Completion on the form incorporated in the project documents, as future reference for the Owner.
- E. CERTIFICATE OF STRUCTURES LOCATIONS: The Contractor shall have a state registered surveyor certify, in writing, with seal affixed, that the location of all new structure(s) is in compliance with the Contract Documents.
- F. TESTING, INSPECTIONS AND CERTIFICATE OF OCCUPANCY: The Contractor shall provide copies of all test and balance reports from his Subcontractors as required. (See Division 21 thru 28.) Provide copies of all Certificates of Inspection from controlling authorities for each trade, division, or section of work, as required. Provide a copy of final executed Certificate of Occupancy.
- G. CONSENT OF SURETY: The Contractor and Contractors shall provide a Consent of Surety on A.I.A. Document G707, Latest Edition.
- H. WARRANTY, GUARANTEE AND BONDS:
1. The Contractor and Subcontractors shall, and hereby does guarantee all Work and materials called for in the Contract Documents, including all work performed by the Contractor and his Subcontractors, for a minimum period of one (1) year from the date of Substantial Completion of the building, unless a longer Warranty/Guarantee time is specified by individual Sections.

The Contractor shall provide a listing of all Sub-Contractors performing work on the site. Required information shall be as follows:

(Example)
Division 1
CM / Contractor Representative's Name
Company Name
Title
Address
Phone Number
Facsimile Number
Start and End of Warranty

Division 2
Earth Moving and Site Grading
Representative's Name

SECTION 008200 – SPECIAL CONDITIONS (continued):

Title
Company Name
Phone Number
Address
Facsimile Number
Start and End of Warranty

2. Warranty guarantee and bonds will be as stated in the Contractor's contract.

I. INSTRUCTION/OPERATION MANUALS AND KEYS:

1. Contractor shall provide all equipment diagrams, instruction/operation manuals, wiring diagrams, and pneumatic and/or electrical control diagrams as applicable for each working characteristic of mechanical, electrical, and special equipment furnished under this Contract, and submitted at Substantial Completion.
2. The Contractor and Subcontractors shall provide a competent and experienced person(s) thoroughly familiar with the work, for a reasonable period of time to instruct the Owner's personnel in operation and maintenance of equipment, materials, and control systems. This instruction shall include normal start-up, run, stop, and emergency operations, location and operation of all controls, alarms, and alarm systems.
3. Label turn-over all keys.

K. MAINTENANCE MANUALS AND SPARE PARTS:

(All items in this Section are required prior to issuance of Certificate of Substantial Completion.)

1. Contractor shall provide all instructions and maintenance manuals for products, mechanical, electrical, and special equipment. This instruction shall include tracing the system in the field and on the diagrams in the manuals so that maintenance personnel will be thoroughly familiar with both systems and the data supplied.
2. Contractor shall submit all parts lists, spare parts, tools, fuses, bulbs, and motor listing, containing locations, motor nameplate, rating, and size of overload relay installed.
3. Contractor shall also provide all maintenance letters as listed in the specifications for manufacturer's cleaning procedures, materials and equipment to be used, including instruction as listed above.

J. AS-BUILT DRAWINGS:

1. Final corrected "As-Built" or "Record" drawings shall be complete and accepted by the Architect/Engineer.
2. Refer to Article 3.11.1, Record Drawings, for specified process and requirements.

ARTICLE 18: HISTORICAL AND ARCHAEOLOGICAL DATA PRESERVATION:

- A. The Contractor agrees to facilitate the preservation and enhancement of structures and objects of historical, architectural or archaeological significance and when such items are found and/or unearthed during the course of project construction. Any excavation by the Contractor that uncovers an historical or archaeological artifact shall be immediately reported to the Owner and a representative of the Architect. Construction within the immediate area shall be temporarily halted pending the notification process and further directions issued by the Architect after consultation with the State Historic Preservation Officer (SHPO) for recovery of the items. See the National Historic Preservation Act of 1966 (80 Stat 915, 16 U.S.C. § 470) and Executive Order No. 11593 of May 31, 1971.

ARTICLE 19 ENVIRONMENTAL REQUIREMENTS:

- A. Endangered Species. The Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of the Contractor, the Contractor will immediately report this evidence to the Owner and a

SECTION 008200 – SPECIAL CONDITIONS (continued):

representative of the Architect. Construction within the affected area shall be temporarily halted pending the notification process and further directions issued by the Architect after consultation with the Florida Fish and Wildlife Conservation Commission.

ARTICLE 20: INDEMNIFICATION:

- A. To be as stated in the Contract between Owner and Contractor.

END OF SECTION 008200

SECTION 008200 – SPECIAL CONDITIONS (continued):

CERTIFICATE OF SUBSTANTIAL COMPLETION

Date: _____ Project No. _____

The work performed under the Contract dated _____
between _____ (the Owner)
and _____ (the Contractor),
for the construction of _____ (Building Name)
was found to be Substantially Completed as of _____ (Date).

The term "Substantial Completion" shall mean that the construction is sufficiently completed in accordance with the Plans and Specifications, as modified in any Change Order agreed to by the parties, so that the Owner can occupy the building and/or utilize the facility/project for the use for which it was intended without hazard to the occupants or to the facility.

A list of items to be completed or corrected is appended hereto. This list may not be exhaustive and the failure to include an item on it does not alter the responsibility of the Contractor or the Contractor to complete all the work in accordance with the Contract Documents, including authorized changes thereto.

The Contractor will complete or correct the work on the list of items appended hereto within fifteen (15) consecutive calendar days from the Date of Substantial Completion.

Owner assumed full possession of the facility above described on _____.

The responsibility of the Contractor to provide utilities, under the Contract Documents shall cease that date and the one-year warranty period or other specified warranty/guarantees so specified shall begin. Insurance coverage shall continue in accordance with provisions as amended in the Contract Documents.

(Architect/Engineer) _____ (Authorized Representative)

(Contractor) _____ (Authorized Representative)

(Owner) _____ (Authorized representative)

SECTION 008200 – SPECIAL CONDITIONS (continued):

CERTIFICATE OF CONTRACT COMPLETION

AGENCY/OWNER: _____

PROJECT: _____

CONTRACTOR: _____

CONTRACT FOR: _____

CONTRACT DATE: _____

CONTRACT AMOUNT: _____

CONTRACTOR'S AFFIDAVIT: _____

I solemnly swear (or affirm): That the work under the above named Contract and all Amendments thereto have been satisfactorily completed; that all amounts payable for materials, labor and other charges against the project will be paid; that no liens have been attached against the project; that no suits are pending by reason of work on the project under the Contract; that all Workers' Compensation Claims are covered by Workers' Compensation Insurance as required by law; and that all public liability claims are covered by insurance.

CONTRACTOR: _____

Signature: _____

Date: _____

Title: _____

(SEAL)

STATE OF _____

COUNTY OF _____

Personally appeared before me this _____ day of _____, _____, known (or made known) to me to be the
(OWNER) OR (PARTNER) _____
of,
(Corporate Official Title) _____

Contractor(s), who, being by me duly sworn, subscribed to the foregoing affidavit in my presence.
(Notary Public)

(Type Name): _____

My Commission Expires: _____

SECTION 008200 – SPECIAL CONDITIONS (continued):

WARRANTY – GUARANTEE

Submit for each individual Warranty – Guarantee specified in each Section of the Specifications:

Division No.: _____

Section No.: _____

Title No.: _____

TO: (Owner)

RE: (Project Name)

(Contractor's Name): _____,
does hereby certify to all guarantees and warranties taking effect on the date of Substantial Completion and shall remain in force as required by the Contract Documents for the Construction of ; and further certifies that all labor, materials, equipment or items necessary to execute said guarantees and warranties shall be furnished at no cost to the Owner for the duration of each guarantee or warranty period.

WARRANTY – GUARANTEE PERIOD:

(Contractor's Name) _____

(Address) _____

By: _____ (type name of signee below)

Title: _____

Sworn to and subscribed before me this

(NOTARIAL SEAL)

_____ day of _____, _____.

Notary Public, State of Florida

My Commission Expires: _____

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 000950 - DIRECT PURCHASES BY OWNER

1. The OWNER is tax exempt and may wish to exercise its right to purchase directly various construction materials, supplies and equipment that may be part of this Contract. The OWNER will, via its purchase orders, purchase the materials and the CONTRACTOR shall assist the OWNER in the preparation of purchase orders. The OWNER may direct the CONTRACTOR to prepare the purchase order on the OWNER'S form and make ready for verification and execution by the OWNER. The materials may be purchased from the vendors/suppliers selected by the CONTRACTOR, for the price originally negotiated by the CONTRACTOR. The CONTRACTOR will prepare a list of materials, supplies and equipment and the OWNER will advise the CONTRACTOR which items from the list it wishes to purchase directly, with enough lead time to allow this request to be incorporated into the overall construction schedule.

2. The Contract amount shall be reduced by the net, undiscounted amount of the purchase order, plus all sales taxes. Issuance of the purchase orders by the Owner does not change any of the CONTRACTOR'S responsibilities regarding material purchases, or installations, with the exception of the payments for the materials so purchased. The CONTRACTOR remains responsible for coordination, correct quantities ordered, submittals, protection, storage, scheduling, shipping, security, expediting, receiving, checking shipping tickets, and invoices, installation, cleaning all applicable warranties, and that all materials purchased meet the requirements of the CONTRACT DOCUMENTS.

3. In the event that materials, supplies, or equipment purchased under this option, are defective or rejected for any reason whatsoever, and it becomes necessary in the opinion of the CONTRACTOR to initiate legal action against the responsible party, the OWNER agrees to assign and subordinate to the CONTRACTOR any claims the OWNER has against the responsible party resulting from the purchase order and to execute any legal documents necessary to accomplish the assignment, subordination or subrogation of such claims, and to cooperate with the CONTRACTOR in such legal action.

ATTEST _____

Secretary

(SEAL)

CONTRACTOR: _____

BY: _____

ATTEST _____

Secretary

As its

OWNER: THE BAY DISTRICT SCHOOLS,
PANAMA CITY, FLORIDA

BY: _____

Chairman

DATE: _____



OFFICE OF
BILL HUSFELT
SUPERINTENDENT

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Jerry Register
District 1

District 2

Pamm Chapman
District 3

Ryan Neves
District 4

Steve Moss
District 5

BAY DISTRICT SCHOOL BOARD DIRECT PURCHASE PROCEDURE

CONTRACTOR INFORMATION SHEET

Requesting a Purchase Order

In an effort to save the additional cost of sales tax, the District may purchase major materials for this construction project, at its discretion. This procedure does not alter, modify or relieve the General Contractor of any obligations specified in the contract documents or of any responsibilities regarding the compliance with specification requirements, coordination, protection, scheduling or warranty.

The General Contractor shall be familiar with Section 01028, "Direct Material Purchase Procedure" in the Project Manual.

The contractors will make out a "Request for Purchase Order" (RPO) {Attachment 1} for orders of approximately \$5,000 and above. Special delivery instructions or other information such as specifications that are required by the vendor should be attached to the (RPO). The (RPO) will be sent to the Facilities Department through the General Contractor.

A purchase order for the material will be processed by the Facilities Department and forwarded to the vendor along with a letter explaining billing procedures {Attachment 2}. A copy of this purchase order will be sent to the General Contractor.

Submitting Invoices for Payment

In the letter sent to vendors {Attachment 2}, vendors are instructed to send invoices directly to the General Contractor. The General Contractor will approve all invoices and forward a copy of each invoice and a Vendor Invoice Transmittal Form {Attachment 3} to the Bay District Schools Facilities Department for payment.

Change Orders

Change Orders to make adjustments in the contract for direct material purchases will be issued periodically as needed. An agreement should be reached as to whether the Facilities Department or the Contractor will initiate the change order. Regardless of which agency initiates the change order the Facilities Department and Contractor should agree on the details of the change order information prior to being sent to the Architect for preparation.

Miscellaneous

It is important for the direct material purchase records of the Facilities Department and the Contractor to agree. It is recommended that periodically during construction, the Contractor provide a copy of their breakdown of direct material payments to the Facilities Department so that possible errors may be found earlier rather than later.

REQUEST FOR PURCHASE ORDER
Bay District Schools - Capital Projects Direct Purchase

Requisition #: _____

PROJECT: _____ **Bay District P.O. #** _____

Contractor: _____ **Date:** _____

Subcontractor: _____ **Vendc** _____

Delivery Address: _____

Vendor: _____

Vendor Address: _____

Vendor Phone: _____ **Fax:** _____

Vendor Contact Person: _____

Vendor Email Address: _____ **(REQUIRED)**

Item No.	Description	Qty	Unit Price	Total Price

NOTES:	Total	\$-
1. You may attach a typed list of items to be ordered	Shipping (Not taxable)	
2. Only include materials that become part of the project.	TOTAL	\$ -
3. Do not include: Labor or Tax		
4. Do not include items that will be used and disposed of or returned to your facility (i.e. tools, paint filter, drop clothes, brushes, etc.		
5. Please breakout the shipping charge or have your supplier bill you directly for shipping		

Requested Delivery Date: _____

Special Delivery Instructions: _____

Fund	Func	Object	Center	Project	Prjx	Amount



OFFICE OF
BILL HUSFELT
SUPERINTENDENT

1311 Balboa Avenue
Panama City, Florida
32412

(850) 872-4100
Hearing Impaired Access
(800) 955-8770 Voice
(800) 955-8771 TDD

www.bay.k12.fl.us

Board Members

Jerry Register
District 1

Brenda Ruthven
District 2

Pamm Chapman
District 3

Winston Chester
District 4

Steve Moss
District 5

MEMORANDUM - SAMPLE

TO: [VENDOR NAME]
FROM: Lee Walters, Executive Director of Facilities
DATE: January 20, 2021
SUBJECT: Direct Material Purchase
Purchase Order # _____ - \$ _____

The Bay District School Board is making this purchase under the District Direct Material Purchase Procedure. The purpose of this procedure is to eliminate the cost of the sales tax for the School District. The Bay District School Board is exempt from all state and county sales tax; tax exemption number 13-06-024866-53C. However, the Contractor is fully responsible for all aspects of this purchase, as if the material purchase was made directly by the company.

All inquiries related to this purchase order should be directed to the Contractor:

GAC Contractors, Inc.
4116 Hwy. 231
Panama City, FL 32404
850-769-3477- Phone

Bay High STEM Building – New Construction

When material is delivered it will be inspected by a Bay District School Board representative and the contractor.

If the material is not acceptable for any reason, the Contractor will negotiate with the supplier on behalf of the School Board to correct any discrepancy.

Supplier shall provide required shipping and handling insurance.

Two copies of payment invoices are required and should be addressed to the contractor listed above. The general contractor will approve and forward the invoices to Bay District School Board for payment.

I VERIFY RECEIPT OF PURCHASE ORDER Fax verification to 850-873-7153

Signature

Printed Name

Attachment 3



VENDOR INVOICE TRANSMITTAL NO: _____ DATE: _____

VENDOR: _____ SCHOOL BOARD PO # _____

TO: Sharron Smith Facilities Department Bay County School Board 1311 Balboa Avenue Panama City, FL 32401	FROM: {Contractor Name} [Contractor Address] {Contractor Address}
--	--

Render Payment To: {Vendor Name} {Vendor Address} {Vendor Address}	
---	--

Invoice Number	Invoice Amount

TOTAL

PURCHASE ORDER BREAKDOWN:	
Purchase Order Amount:	
Previously Paid:	
Amount Due This Request:	
Balance to Finish:	
Total Billed to Date	

I certify that the above materials have been received in good condition and payment may be made.

Authorized Signature: _____

Printed Name & Title: _____



**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 000951 - DIRECT MATERIAL PURCHASE PROCEDURE

PART 1 - MAJOR MATERIAL PURCHASE

1.01 GENERAL:

A. As a service to Contractors, and as a cost savings measure for the District, Bay County School Board may direct purchase major materials for construction project.

1.02 PROCEDURE

A. The School Board may issue purchase orders and process payment for invoices approved by the Contractor. The Construction Manager (C.M.) is responsible for all ordering of materials, delivery, installation and warrantee. This purchase process does not alter, modify or relieve the C.M. of any obligations specified in the Contract Documents.

1.03 COST OF MATERIALS AND EQUIPMENT

A. C.M. will include the cost of construction materials and equipment in the Guaranteed Maximum Price. The Guaranteed Maximum Price will also include all Florida State sales and other taxes normally applicable to such material and equipment. The Owner may, at its own discretion, purchase such materials and equipment directly from the supplier. The Owner may consider purchasing any item but does not expect to purchase items less than \$5,000.

1.04 SALES TAX

A. In the event the owner elects to make direct purchases, the C.M. will not be responsible for paying sales tax on such items. Such items are referred to in this Section as "Direct Purchase Material". The responsibilities of the Owner, Architect/Engineer (A/E) and C.M. relative to the Direct Material Purchase shall be governed by the terms and conditions of this Section. This Section shall take precedence over any conflicting conditions and terms of other Contract Documents. All clerical, administrative, management, supervisory, inspection, handling, storage and other costs necessary for the C.M. to comply with this Section are included in the C.M.'s Guaranteed Maximum Price.

1.05 COST OF BONDS

A. Cost of the bonds shall be included in the C.M.'s Guaranteed Maximum Price. The C.M. may select the supplier or suppliers from whom it wishes to purchase materials or equipment as long as the material or equipment meets the specification which relates to that material or equipment.

1.06 SUBCONTRACTORS COMPLIANCE

The C.M. shall furnish the Owner, through the A/E, with a Direct Material Purchase Form identifying each item or material or equipment to be purchased by the Contractor for the Project. The Direct Material Purchase Form shall include:

1. The name, address, telephone number and contact person for the supplier and the name and address of the project.

2. Manufacturer or brand, model or specification number of the item.
3. Quantity needed as estimated by the C.M. or subcontractor.
4. The price quoted by the supplier for the material or equipment in questions.
5. Any sales tax associated with such quote.
6. Shipping, handling and insurance costs.
7. Delivery dates as established by the C.M. or subcontractor.
8. Special terms and conditions which have been negotiated with the supplier relative to payment terms, discounts, rebates, warranty, credits or other terms and conditions which will revert to the Owner.
9. Statement with the submittal control number that material/equipment have been reviewed and approved by A/E during the shop drawing submittal process.

1.08 OWNER'S PURCHASE ORDER

A. Promptly upon receipt of a Direct Material Purchase Form, the Owner will initiate a purchase order for the material/equipment which the Owner chooses to purchase. The purchase order shall require that the supplier provide required shipping and handling insurance. The purchase order shall also require the delivery of the Direct Material Purchase items on the delivery dates provided by the C.M. in the Request Form. A copy of each purchase order will be furnished to the C.M. The C.M. shall promptly review the copy of the purchase order and verify that items ordered are in accordance with the Direct Materials Purchase Request Form, the terms of this contract, and with the C.M.'s requirements.

B. The invoice for the Direct Material Purchase items will be sent directly to the Owner with a courtesy copy sent to the C.M.

1.09 DEDUCTIVE CHANGE ORDERS

A. The C.M. shall prepare and execute, on a monthly basis, deductive Change Orders to reflect purchases made by the Owner. The amount of the deduction shall be based on the requisition amount plus sales tax. These Change Orders must be executed before the related purchase order will be paid.

B. Contractor's overhead and profit shall not be deducted on change orders for Direct Material Purchase items.

1.10 SHOP DRAWINGS

A. Nothing in this Section shall alter or modify the procedures for submission of shop drawings and other submittals by the C.M.

1.11 DELIVERY TO JOB SITE

A. When the Direct Material Purchase Items are delivered to the project, either by common carrier or manufacturer's/supplier's vehicle, the title to these items shall pass to the Owner. The Owner's Representative and C.M. shall jointly inspect each deliver for manufacturer/brand, quantity and condition. The C.M. and Owner's Representative shall both sign the invoice after the inspection; by this process the ownership will transfer from the Owner to the C.M.

B. There upon; the C.M. shall be fully responsible for all matters relating to the receipt, protection and risk loss of Direct Material Purchase Items the same as if such items were purchased by the C.M. or subcontractor until such items are incorporated and accepted by the Owner as a finished product.

C. At a minimum, the C.M. shall verify correct quantities, verify documentation, coordinate and expedite delivery, obtain and verify warranties required by contract documents, inspect and accept each item at the time of delivery, unload, handle and store the item.

D. Direct purchase of materials by the Owner in no way relieves the C.M. of any responsibilities regarding the compliance with specification requirements, coordination, protection, scheduling or warranty.

E. As Direct Material Purchase Items are delivered to the job-site, Contractor shall visually inspect all shipments, and approve the supplier's shipping documents and the courtesy invoice. The C.M. and Owner's Representative shall assure that each delivery is accomplished by documentation adequate to identify the purchase order against which the purchase is made.

F. After courtesy invoices have been signed by both the C.M. and Owner's Representative, the completed invoices will be processed for payment.

G. The C.M. shall inspect to determine that Direct Material Purchase Items conform to the purchase requisition form and determine prior to the incorporation into the project if such materials are defective. If the C.M. discovers defective or non-conforming items it shall not utilize such items in the project and shall promptly notify Owner of the defect or non-conformity and assist Owner in obtaining repair or replacement of item.

H. The C.M. shall be fully responsible and liable to the Owner if they fail to perform such inspection or otherwise permit defective or non-conforming material or equipment to be incorporated into the project. This requirement does not relieve the C.M. of its obligation to ensure that materials requested for purchase have been reviewed and approved by the A/E through shop drawing and submittal procedures.

1.12 WARRANTY

A. Contractor warrants Direct Material Purchase Items the same as all other materials and equipment furnished by the C.M. and nothing in this Section shall alter or modify the C.M.'s obligations under the Contract relative to warranties.

1.13 INSURANCE

A. The C.M. shall purchase the insurance for the benefit and protection of the Owner, A/E and C.M. sufficient to protect against any loss of or damage to Direct Materials Purchase Items. The Owner is paying for this insurance as part of the Contract Price.

B. Such insurance shall cover the full value of any Owner-Furnished Materials not yet incorporated into the project starting from the time of material acceptance. The C.M. shall be solely responsible for any loss or damage attributed to the C.M. to the extent that the Owner is not compensated by the insurance stated above.

1.14 DELAY OR INTERRUPTION

A. Owner shall not be liable for any interruption or delay damages in connection with Direct Material Purchase Items except where Owner fails within (30) days of receipt or a Purchasing Requisition Form to either cause the Owner to award a Purchase Order or notify the C.M. that the Owner elects not to purchase an item.

1.15 REPORTS

A. The C.M. shall on a bi-weekly basis provide Owner with documentation establishing the amount and nature of the material and equipment delivered by suppliers and accepted by the C.M. during the reporting period.

B. The C.M. shall correspond all material and equipment to purchase orders, courtesy invoices, delivery tickets, and inspection and acceptance reports.

C. The C.M. shall also obtain lien waivers and other releases from suppliers. Upon receipt of appropriate documentation from the C.M., payment will be made by owner directly to the appropriate supplier.

END OF SECTION 000951

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 011000 - SUMMARY OF WORK

PART 1 - GENERAL

1.01 **RELATED DOCUMENTS:** Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division-1 Specification Sections, apply to this Section.

1.02 **PROJECT DESCRIPTION**

- A. The MOSLEY HIGH SCHOOL SOFTBALL FIELDHOUSE project consists of approximately 1628 S.F. of new construction as indicated on drawings.
1. Project Location: Lynn Haven, FL
 2. Owner: Bay District Schools
- B. Contract Documents dated APRIL 3, 2026 were prepared for the Project by JRA ARCHITECTS, INC. 2211 Navy Blvd., Suite 100 Panama City Beach, FL 32408-5815.
- C. The work consists of:
1. New mechanical, electrical and plumbing systems.
 2. New interior partitions, doors, windows and finishes.
 3. New CMU exterior walls.
 4. New standing seam metal roof.
 5. New site work.
- D. Work Sequence: The work will be conducted in such a sequence to minimize interference to Owner's normal activities.
- E. Applicable Codes: All work shall be completed in accordance with the following codes where applicable:
- | | | |
|----|--|---------------------------|
| 1. | Florida Building Code, Building (FBC,B) | (2023) |
| 2. | Florida Building Code, Accessibility (FBC,A) | (2023) |
| 3. | Florida Building Code, Mechanical (FBC,M) | (2023) |
| 4. | Florida Building Code, Fuel Gas (FBC,FG) | (2023) |
| 5. | Florida Building Code, Plumbing (FBC.P) | (2023) |
| 6. | Florida Fire Prevention Code (FFPC) | (8th Edition) |
| 7. | National Electric Code (NEC) | (2020) |
| 8. | NFPA 101 | (8 th Edition) |
- F. Product Approval: The Contractor shall, for each product installed in the building envelope, either; provide the applicable Product Approval Numbers OR provide certification (for alternate means of Building code approval) that products installed conform to the Florida Building Code 2023. The list of products is as follows:
1. Exterior doors.
 2. Windows.
 3. Roofing products.
 4. Structural components.
 5. Other products as applicable.
- Note: The list shown above is not comprehensive. No effort was made to list each and every possible aperture in the building envelope. The Contractor shall determine what products apply and furnish the applicable Product Approval Numbers, or the required testing and subsequent certifications to meet the Florida Building Code. The Product Approval List can be found within the Florida**

SECTION 011000 - SUMMARY OF WORK (continued):

Building Code website.

- G. Construction Manager has been engaged for this project to serve as Contractor who in turn Subcontracts all or portions of the work. In Divisions 1 through 33, the terms “Construction Manager” and “Contractor” are synonymous.

1.03 **CONTRACTOR USE OF PREMISES**

- A. **General:** During the construction period, the contractor shall have use of the premises for construction activities in areas indicated or agreed upon by the Owner.
1. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
 2. Contractor to note/delineate any wetlands and protect them during construction. BDS to be held harmless if subcontractors invade this area.
 3. Keep surrounding driveways, sidewalks, and entrances serving the site clear and available to the Owner and Visitors at all times. Do not use these areas for parking or storage of materials.
- B. **Construction Safeguards:** The contractor shall construct safeguards to protect personnel and visitors from the construction areas and areas where materials are stored. Limits of the construction safeguards shall be determined by the Owner.

- 1.04 **DRESS CODE AND CONDUCT:** All workmen on the construction site shall always wear a shirt. No workmen shall engage in any verbal expressions or physical gestures directed towards any visitors, employees of Owner, or any other person at this construction site which may be considered sexual harassment. All workers are always to be badged. There is no smoking on any part of the property. Any person not meeting these standards will be banned from this construction site.

PART 2 - PRODUCTS (Not applicable).

PART 3 - EXECUTION

- 3.01 **LAYOUT OF THE WORK:** Dimensions and elevations indicated on the drawings shall be verified by the Contractor prior to commencement of work. Discrepancies between drawings, specifications, and existing conditions shall be referred to the Architect for adjustment before affected work is performed. Failure to make such notification shall place responsibility upon the Contractor to carry out the work in a satisfactory and workmanlike manner at no additional cost to the Owner.

3.02 **RESTORATION**

- A. Remove, cut, alter, replace, patch and repair existing work as necessary to install new work. Except as otherwise shown or specified, do not cut, alter or remove any structural work and do not disturb any plumbing, steam, gas or electric work without approval.
- B. Existing work (mechanical and electrical work, lawns, paving, roads, walks, etc.) disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled, or replaced with new work, and refinished and left in as good condition as existed before commencing work. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to Architect before it is disturbed. Materials and workmanship used in restoring work, shall conform in type and quality to that of original existing construction, except as otherwise shown or specified.

SECTION 011000 - SUMMARY OF WORK (continued):

- C. Upon completion of contract, deliver work complete and undamaged. Damage that may be caused by Contractor or his workmen to existing structures, grounds, and utilities or work done by others shall be repaired by him at no additional cost to the Owner and left in as good condition as existed prior to damaging.
- D. At his own expense, Contractor shall immediately restore to service and repair any damage he may cause to existing piping and conduits, wires, cables, fiber, etc., of utility services or of fire protection systems and communications systems which are not scheduled for discontinuance or abandonment. Contractor shall employ appropriate parties for repair work.

3.03 **CLEANING UP**

- A. At completion of the work, the Contractor shall remove from the building and site all tools, appliances, surplus materials, debris, temporary structures and facilities, scaffolding, and equipment; sweep clean the building thoroughly and remove all marks, stains, fingerprints, dust, dirt, paint drippings, and the like from all surfaces; clean tile work, windows, plumbing, and other fixtures and surfaces.
- B. All hardware and other unpainted metals shall be cleaned and polished, and all equipment and paint or decorated work shall be cleaned and touched up, if necessary. Surfaces that are waxed shall be polished. Remove all temporary labels, tags, and paper covering throughout the building.
- C. The exterior of the buildings, the grounds, approaches, equipment, pavement, sidewalks, etc., shall be cleaned similar to interior of buildings and left in good order at the time of final acceptance, with paint surfaces clean and unbroken, hardware clean and polished, all repair work accomplished and dirt areas scraped and cleared of weed growth.
- D. Cleaning, polishing, sealing, waxing, and all other finish operations indicated on the drawings, or required in the specifications, shall mean that this is the required condition at the time of acceptance of all work under the contract.

END OF SECTION 011000

SECTION 011000 - SUMMARY OF WORK (continued):

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 012500 – SUBSTITUTION PROCEDURES

PART 1 - GENERAL

- 1.01 **SUBSTITUTIONS**: Requests for changes in products, materials, equipment, and methods of construction required by Contract Documents proposed by the Contractor after award of the Contract are considered requests for "substitutions." The following **are not** considered substitutions:
- A. Substitutions requested during the bidding period and accepted prior to award of Contract.
 - B. Revisions to Contract Documents requested by the Owner or Architect.
 - C. Specified options of products and construction methods included in Contract Documents.
 - D. Compliance with governing regulations and orders issued by governing authorities.
- 1.02 **SUBMITTAL**: Requests for substitution will be considered if received within 30 days after commencement of the Work. Requests received may be considered or rejected at the discretion of the Architect after review. See mechanical and electrical "General Provisions" section for special substitution requirements.
- A. Submit 3 copies of each request for substitution in the form and in accordance with procedures for Change Order proposals.
 - B. Identify the product, or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Document compliance with requirements for substitutions, and the following information, as appropriate:
 - 1. Product Data, including Drawings and descriptions of products, fabrication and installation procedures.
 - 2. Samples, where applicable or requested.
 - 3. A comparison of significant qualities of the proposed substitution with those specified.
 - 4. A list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors that will be necessary to accommodate the proposed substitution.
 - 5. A statement indicating the substitution's effect on the Construction Schedule compared to the Schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
 - 6. Cost information, including a proposal of the net change, if any in the Contract Sum.
 - 7. Certification that the substitution is equal-to or better in every respect to that required by Contract Documents, and that it will perform adequately in application indicated. Include Contractor's waiver of rights to additional payment or time that may be necessary because of the substitution's failure to perform adequately.
 - C. **Architect's Action**: Within one week of receipt of the request for substitution, the Architect will request additional information necessary for evaluation. Within 2 weeks of receipt of the request,

SECTION 012500 – SUBSTITUTION PROCEDURES (continued):

or one week of receipt of additional information, whichever is later, the Architect will notify the Contractor of acceptance or rejection. If a decision on use of a substitute cannot be made within the time allocated, use the product specified. Acceptance will be in the form of a Change Order.

- 1.03 SUBSTITUTIONS: The Contractor's substitution request will be received and considered by the Architect when one or more of the following conditions are satisfied, as determined by the Architect; otherwise requests will be returned without action except to record noncompliance with these requirements.
- A. The request is directly related to an "or approved equal" clause or similar language in the Contract Documents.
 - B. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the Work promptly or coordinate activities properly.
 - C. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
 - D. A substantial advantage is offered the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or separate contractors, and similar considerations.
 - E. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
 - F. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
 - G. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
- 1.04 The Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

END OF SECTION 012500

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 012900 – PAYMENT PROCEDURES

PART 1 - GENERAL

1.01 **SCHEDULE OF VALUES**: Coordinate preparation of the Schedule of Values with the Contractor's Construction Schedule. Correlate line items in the Schedule of Values for each phase with other schedules and forms, including:

Contractor's Construction Schedule.
Application for Payment form.
List of subcontractors.
List of products.
Schedule of submittals.

- A. Submit the Schedule of Values to the Architect and Owner at the earliest date, but no later than 7 days before the date scheduled for submittal of the initial Application for Payment.
- B. **Format and Content**: Use the Project Manual Table of Contents as a guide to establish the format.
Identification: Include the following identification:
Project name and location.
Name of the Architect.
Project number.
Contractor's name and address.
Date of submittal.

Format: Use AIA Document G703 Continuation Sheet.

Break down each Division that is listed in enough detail to facilitate evaluation of Application for Payments. Round amounts off to the nearest dollar; the total shall equal the Contract Sum.

Each item in the Applications for Payment and Continuation Sheet shall be complete including total cost and share of overhead and profit. Temporary facilities and items that are not direct cost of Work-in-place may be shown as separate line items or distributed as general overhead expense.

Update and resubmit the schedule when Change Orders change the Contract Sum.

- C. **Change Management**: Any change in the project's 'schedule of values' line items shall be noted to the architect and owner monthly prior to changing the owner schedule of values via a submitted pay application.
- a. ***EXAMPLE***:
- i. *Month 1 - site line item = 1000.00.*
 - ii. *Month 2 – site line item = 1500.00, a 500.00 change has been listed in the schedule of values.*
 - iii. *What is the audit path for the change in scheduled value under the sit line item?*
 1. *Did the owner receive a copy of the paperwork documentation back-up requiring this change (RFI, ASI, RFP)?*
 2. *Did the owner receive a proposal for the change in scope prior to proceeding?*
 3. *Did the owner receive a copy of any subcontractor change issued?*
 4. *Did the owner receive a copy of the change management document indicating the proposed change was accepted by the architect and approved by the owner?*
 5. *What GMP line item did the funding added to site line item come from?*

SECTION 012900 – PAYMENT PROCEDURES (continued):

- b. All these noted audit path requirements may be accomplished in different ways but shall be required (at a minimum) regardless of amount or scope of the change. It shall be agreed upon at the outset of each project how change management will be implemented for each of the various types of changes that may occur. It will be noted in project meeting minutes as to the agreed upon method for change management. Subsequent to those agreements change management shall be implemented in strict compliance with the agreed upon methodology.

1.02 **APPLICATIONS FOR PAYMENT:** Applications for Payment shall be submitted by the 25th of the month and will be paid by the 10th of the following month. Applications for Payment not received by the 25th of the month will be paid not later than 15 days after the date received. The period covered by each Application for Payment is one month. A retainage of 10% of the amount earned and stored will be withheld from each payment.

- A. **Payment Application Times:** Payment dates are indicated in the Agreement. The period covered by each application is the period indicated.
- B. **Payment Application Forms:** Use AIA Document G 702 and Continuation Sheets G 703, 1992 edition, as the form for the application.
- C. **Application Preparation:** Complete every entry, including notarization and execution by person authorized to sign on behalf of the Contractor. Incomplete applications will be returned without action. Entries shall match data on the Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions have been made. Include amounts of Change Orders issued prior to the last day of the period covered by the application.
 - a. The first pay application must mimic the approved GMP for the project, or mimic the project bid for the work.
 - b. Per change management section listed in 1.01C, subsequent pay applications may include changes to various line items within the schedule of values. Changes shall be tracked monthly and documentation provided to ensure a clear auditable trail for the project accounting starting with the GMP and ending with the final pay application on the project.
 - c. Each successive pay application must be accompanied by change management paperwork sufficiently detailed to ensure all parties are clear regarding changes or adjustments to the schedule of values.
 - d. It is the sole discretion of the owner to determine what documentation is adequate. However, the minimum required documentation is listed in the change management section herein.
- D. **Transmittal:** Submit 4 executed copies of each application to the Architect within 24 hours; two copies shall be complete, including waivers of lien where required and similar attachments. Transmit each copy with a transmittal listing attachments, and recording information related to the application.
- E. **Waivers of Lien:** With final application, submit waivers of lien from every entity who has performed work, provided labor or supplied materials. Waivers of Lien are to be provided by, but not limited to the following material suppliers and subcontractors. This list is for illustration only, not necessarily complete.

Concrete	Masonry	Paving
Steel	Site Work	Landscaping
Finish Carpentry	Roofing	Doors
Windows	Finish Hardware	Gypsum Wallboard
Flooring	Painting	Ceilings
Signage	Toilet & Bath Accessories	

SECTION 012900 – PAYMENT PROCEDURES (continued):

Mechanical

Plumbing

Electrical

- F. Waiver Forms: Submit waivers of lien on AIA Document G706A, "Contractor's Affidavit of Release Of Liens".
- 1.03 INITIAL APPLICATION FOR PAYMENT: Administrative actions and submittals that must precede or coincide with submittal of the first Application for Payment include:
- Fully executed Contract.
 - List of subcontractors.
 - List of suppliers and fabricators.
 - Schedule of Values.
 - Contractor's Construction Schedule (preliminary if not final).
 - Submittal Schedule (preliminary if not final).
 - List of Contractor's staff assignments.
 - Copies of building permits (if required).
 - Copies of licenses from governing authorities.
 - Certificates of insurance and insurance policies.
 - Performance and payment bonds.
- 1.04 PARTIAL RETAINAGE RELEASE
- A. FORMS: Use AIA Document G707A, "Consent of Surety To Reduction in Or Partial Release Of Retainage".
- B. Retainage may only be reduced to 5% with owner approval and in no case will final retainage be released until all items required for final completion are completed and accepted by the architect and the owner.
- 1.05 APPLICATION FOR PAYMENT AT SUBSTANTIAL COMPLETION: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; reflect Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions. Administrative actions and submittals that precede or coincide with this application include:
- Occupancy permits.
 - Test/adjust/balance records (Final).
 - Operation and Maintenance instructions.
 - Meter readings.
 - Change-over information related to Owner's occupancy.
 - Training as Specified
 - Final Cleaning
 - As-builts
- 1.06 BUYOUT SAVINGS AND CONTINGENCY USAGE: Buy out savings, contingency, and any other project funds are the property of the owner under the control of the Contractor or CM. ALL buy out savings and contingency funds used shall be reported to the owner and may not be used without notification to the owner. See Change management section 1.01C.
- 1.07 FINAL PAYMENT APPLICATION: Administrative actions and submittals which must precede or coincide with submittal of the final payment application include:
- Completion of Project closeout requirements. 100% complete to the satisfaction of the Owner and Architect. Refer to Section 01700 - Project Closeout.
 - Warranties and maintenance agreements.
 - Completion of all items specified for completion after Substantial Completion.
 - Transmittal of required Project construction records to Architect.
 - AIA Document G706, "Contractor's Affidavit of Payment of Debts and Claims".

SECTION 012900 – PAYMENT PROCEDURES (continued):

Change of door locks to Owner's access.
AIA Document G707, "Consent of Surety To Final Payment".

END OF SECTION 012900

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 013100 - PROJECT COORDINATION

PART 1 - GENERAL

1.01 **THIS SECTION** specifies requirements for project coordination including:

Coordination with other Contractors.	General installation provisions.
Administrative and supervisory personnel.	Cleaning and protection.

1.02 **COORDINATION**: Coordinate activities included in various Sections to assure efficient and orderly installation of each component. Coordinate operations included under different Sections that are dependent on each other for proper installation and operation.

Where installation of one component depends on installation of other components before or after its own installation, schedule activities in the sequence required to obtain the best results.

Where space is limited, coordinate installation of different components to assure maximum accessibility for maintenance, service and repair.

Make provisions to accommodate items scheduled for later installation.

Coordinate installations such that items requiring maintenance are readily accessible. Do not block maintenance access to these components with follow on installation. Anything blocked will be corrected by the sub-contractor.

Prepare memoranda for distribution to each party involved outlining required coordination procedures. Include required notices, reports, and attendance at meetings.

Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

1.03 **ADMINISTRATIVE PROCEDURES**: Coordinate scheduling and timing of administrative procedures with other activities to avoid conflicts and ensure orderly progress. Such activities include:

Preparation of schedules.	Delivery and processing of submittals.
Power and utility shutdowns.	Progress meetings.
Installation and removal of temporary facilities.	Project closeout activities.

1.04 **COORDINATION DRAWINGS**: Prepare Coordination Drawings where close coordination is required for installation of products and materials fabricated off-site by separate entities, and where limited space necessitates maximum utilization of space for efficient installation of different components.

Show relationship of components shown on separate Shop Drawings.
Indicate required installation sequences.

1.05 **STAFF NAMES**: Within 10 days of Notice to Proceed, submit a list of Contractor's staff assignments, including Superintendent and personnel at the site; identify individuals, their duties and responsibilities, addresses and telephone numbers. Staff substitutions must be approved by owner in advance.

Post copies in the Project meeting room, the field office, and at each temporary telephone.

1.06 **INSPECTION OF CONDITIONS**: The Installer of each component shall inspect the substrate and all other

SECTION 013100 - PROJECT COORDINATION (continued):

conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected and as follows:

- a. MVER/RH/BNLT moisture readings for slabs on grade or walls must pass manufacturer requirements.
 - b. Humidity and temperature control ranges for installation must meet manufacturer requirements.
 - c. Other items must meet the listed, installation requirements set forth by the manufacturer.
- 1.07 MANUFACTURER'S INSTRUCTIONS: Comply with manufacturer's installation instructions and recommendations, to the extent that they are more stringent than requirements in Contract Documents.
 - 1.08 INSPECT material immediately upon delivery and again prior to installation. Reject damaged and defective items.
 - 1.09 PROVIDE ATTACHMENT and connection devices and methods necessary for securing each construction element. Secure each construction element true to line and level. Allow for expansion and building movement.
 - 1.10 VISUAL EFFECTS: Provide uniform joint widths in exposed Work. Arrange joints to obtain the best effect. Refer questionable choices to the Architect for decision.
 - 1.11 RECHECK MEASUREMENTS and dimensions, including elevations, before starting installation.
 - 1.12 INSTALL EACH COMPONENT during weather conditions and project status that will ensure the best results. Isolate each part from incompatible material as necessary to prevent deterioration.
 - 1.13 COORDINATE TEMPORARY ENCLOSURES with inspections and tests, to minimize uncovering completed construction for that purpose.
 - 1.14 MOUNTING HEIGHTS: Where mounting heights are not indicated, install components at standard heights for the application indicated or refer to the Architect.
 - 1.15 CLEANING AND PROTECTION: During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

Clean and maintain completed construction as often as necessary through the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

Limiting Exposures: Supervise operations to ensure that no part of construction, completed or in progress, is subject to harmful or deleterious exposure. Such exposures include, but are not limited to the following:

- Excessive static or dynamic loading.
- Excessive internal or external pressures.
- Excessive weathering.
- Excessively high or low temperatures or humidity.
- Air contamination or pollution.
- Water or ice.
- Chemicals or solvents.
- Heavy traffic, soiling, staining and corrosion.
- Rodent and insect infestation.
- Unusual wear or other misuse.
- Contact between incompatible materials.
- Theft or vandalism.

SECTION 013100 - PROJECT COORDINATION (continued):

END OF SECTION 013100

SECTION 013100 - PROJECT COORDINATION (continued):

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SECTION 013200 - PROJECT MEETINGS

PART 1 - GENERAL

1.01 **SUMMARY:** This Section specifies requirements for Project meetings including:

Pre-Construction Conference.
Progress Meetings.

1.02 **PRE-CONSTRUCTION CONFERENCE:** Architect shall conduct a pre-construction conference after execution of the Agreement and prior to commencement of construction activities. Review responsibilities and personnel assignments.

Attendees: The Owner, Architect and their consultants, the Contractor and its superintendent, subcontractors, suppliers, manufacturers, and other concerned parties shall be represented by persons authorized to conclude matters relating to the Work.

Agenda: Discuss significant items that could affect progress, including the tentative construction schedule, critical sequencing, use of the premises, procedures for processing Change Orders and equipment deliveries.

Review progress of other activities and preparations for the activity under consideration at each conference, including time schedules, manufacturer's recommendations, weather limitations, substrate acceptability, compatibility problems and inspection and testing requirements.

Record significant discussions, agreements and disagreements of each conference, along with the approved schedule. Distribute the meeting record to everyone concerned, promptly, including the Owner and Architect.

Do not proceed if the conference cannot be successfully concluded. Initiate necessary actions to resolve impediments and reconvene the conference at the earliest feasible date.

1.03 **PROGRESS MEETINGS:** Conduct progress meetings at regular monthly intervals. Notify the Owner and Architect of scheduled dates. Coordinate meeting dates with preparation of the payment request.

Attendees: The Owner and Architect, each subcontractor, supplier or other entity concerned with progress or involved in planning, coordination or performance of future activities shall be represented by persons familiar with the Project and authorized to conclude matters relating to progress.

Agenda: Review minutes of the previous progress meeting. Review significant items that could affect progress. Include topics appropriate to the current status of the Project including:

RFIs	Change Orders
Scheduling	Submittals

Reporting: Distribute copies of the minutes of the meeting to each party present and to parties who should have been present.

1.04 **CONTRACTOR'S CONSTRUCTION SCHEDULE:** Review progress since the last meeting. Determine where each activity is in relation to the Contractor's Construction Schedule, whether on time or ahead or behind schedule. Determine how construction behind schedule will be expedited; secure commitments

SECTION 013200 - PROJECT MEETINGS (continued):

from parties involved to do so. Discuss whether revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.

Review the present and future needs of each entity present, including such items as:

- Time.
- Sequences.
- Deliveries.
- Off-site fabrication problems.
- Site utilization.
- Temporary facilities and services.
- Hazards and risks.
- Quality and Work standards.
- Change Orders.
- Documentation of information for payment requests.

- 1.05 PROJECT CLOSE OUT MEETING: Once the contractor has gathered a complete project close out deliverable including both hard copies and electronic copies, warranties, extra parts and any other close out required items, they are to notify the architect that they are ready to schedule the project close out meeting.

END OF SECTION 013200

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SECTION 013300 - SUBMITTALS

PART 1 - GENERAL

1.01 GENERAL PROCEDURES

- A. Coordinate submittal preparation with performance of construction activities, and with purchasing or fabrication, delivery, other submittals and related activities. Transmit in advance of performance of related activities to avoid delay.
- B. Coordinate transmittal of different submittals for related elements so processing will not be delayed by the need to review concurrently for coordination. The Architect reserves the right to withhold action on a submittal requiring coordination until related submittals are received.

1.02 **PROCESSING**: Allow two weeks for initial review. Allow more time if processing must be delayed for coordination with other submittals. The Architect will notify the Contractor when a submittal must be delayed for coordination. Allow two weeks for reprocessing each submittal.

No extension of time will be authorized because of failure to transmit submittals sufficiently in advance of the Work to permit processing.

1.03 **SUBMITTAL PREPARATION**: Place a label or title block on each submittal for identification. Provide two 4" x 5" spaces on the label or beside the title block on Shop Drawings to record Contractor's review and approval markings and action taken. Include the following information on the label for processing and recording action taken. Submittals received without a signed Contractor's Approval Stamp will be returned for resubmittal with no action taken.

Project name.
Date.
Name, address and contact info of Contractor.
Name, address and contact info of supplier.
Name and contact info of manufacturer.
Number and title of appropriate Specification Section.
Drawing sheet number and detail references, as required.

1.04 **SUBMITTAL TRANSMITTAL**: Package submittals appropriately for transmittal and handling. Transmit with a transmittal form. Submittals received from other than the Contractor will be returned without action.

Transmittal Form: Use AIA Document G 810 or other form acceptable to Architect. On the form record requests for data, and deviations from Contract Documents. Include Contractor's certification that information complies with Contract Documents.

1.05 **CONTRACTOR'S CONSTRUCTION SCHEDULE**: Submit a fully developed, CPM type construction schedule with Gantt chart showing critical path and interrelated installations, within 14 days after the date of the Owner's issuance of a Notice to Proceed. Use the categories of work in the schedule to establish the categories in the "Schedule of Values".

As work progresses, mark the schedule to indicate Actual Completion.

Provide notations on the Schedule depicting the consequences on the Work from construction phasing.

Prepare the schedule on sheets of sufficient width to show data for the entire construction period.

SECTION 013300 - SUBMITTALS (continued):

Secure commitments for performing critical construction operations from parties involved. Coordinate each activity with other activities and show in proper sequence; include minor elements involved in the construction sequence. Indicate sequences necessary for completion of related portions. Coordinate the Construction Schedule with the Schedule of Values, list of subcontracts, Submittal Schedule, progress reports, payment requests and other schedules. Schedule completion in advance of the date established for Substantial Completion. Schedule Substantial Completion to allow time for the Architect's procedures necessary for certification of Substantial Completion.

Print and distribute schedule following initial approval to the Architect, Owner, subcontractors and other parties required to comply with scheduled dates. Redistribute after any approved revisions. Post copies in the temporary field office. Submit update schedule with each Pay Application.

- 1.06 **DAILY CONSTRUCTION REPORTS:** Prepare a daily construction report, recording information concerning events at the site. Submit duplicate copies to the Architect at weekly intervals. Include the following information:

List of subcontractors at the site.
Work Activities.
High and low temperatures, general weather conditions.
Accidents, stoppages, delays, shortages, losses.
Emergency procedures.
Change Orders received, implemented.
Partial Completions, occupancies.
Substantial Completions authorized.
Other relevant dates.

- 1.07 **SUBMITTALS:** Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 4 sets plus the number of sets required by the Contractor; maximum eight (8) sets. The Architect will retain four sets and return the others marked with the action taken. **(Note: Architect will mark only one (1) set for return to the Contractor with action taken and/or modifications required.)** Maintain Sample sets at the Project site, for quality comparisons throughout construction phase.

Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.

- 1.08 **ARCHITECT'S ACTION:** Except for submittals for record, information or similar purposes, where action and return is required, the Architect will review each submittal, mark to indicate action taken, and return. Compliance with specified characteristics is the Contractor's responsibility.

Action Stamp: The Architect will stamp each submittal with a self-explanatory action stamp. The stamp will be appropriately marked to indicate action taken.

- 1.09 **DISTRIBUTION:** Furnish copies of final submittal to installers, and others required for performance of construction activities. Show distribution on transmittal forms. Do not proceed with installation until an applicable copy of Product Data is in the installer's possession. Do not permit use of unmarked copies of Product Data in connection with construction.

- 1.10 **SHOP DRAWINGS:** Submit information, drawn to accurate scale. Submittals shall **indicate deviations from Contract Documents.** Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Include the following information:

Project Name.
Location.

SECTION 013300 - SUBMITTALS (continued):

Suppliers Name.
Date.
Drawing No.
Specification Section Reference.
Dimensions.
Identification of products and materials included.
Compliance with specific standards.
Notation of coordination requirements.
Notation of dimensions established by field measurement.

Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 24" x 36".

Initial Submittal: Submit one correctable translucent print and two blue-line print for review; the reproducible print will be returned.

Final Submittal: Submit four (4) blue or black line prints of the original submittal for use by the Architect/Engineer, Owner and Contractor.

Do not use Shop Drawings without a Architects stamp indicating action taken in connection with construction.

The Contractor shall schedule all shop drawing submittals to allow sufficient time for one initial review and two resubmittal reviews.

- 1.11 COORDINATION DRAWINGS are a special type of shop drawing depicting relationship and integration of different construction elements requiring coordination during fabrication or installation to fit and function as intended.

Preparation of coordination drawings is described in these Specifications under "Project Coordination" and may include components previously shown on shop drawings or product data.

Submit for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

- 1.12 PRODUCT DATA: Collect Product Data into a single submittal for each element or system. Mark each copy to show applicable choices and options. Where Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

Manufacturer's printed recommendations.
Compliance with recognized trade association standards.
Compliance with recognized testing agency standards.
Application of testing agency labels and seals.
Notation of dimensions verified by field measurement.
Notation of coordination requirements.

- A. Submittals: Submit 3 copies. The Architect will retain two and will return the others. **Note:** The Architect will mark only one set for return to the Contractor with action taken and/or modifications required. The Contractor will be responsible to see that any notes made by the Architect are made on all copies.

Unless noncompliance with Contract Documents, the submittal may serve as the final submittal.

- B. Distribution: Furnish copies of final submittal to installers and others required for performance of construction activities. Show distribution on transmittal forms. Do not proceed with installation

SECTION 013300 - SUBMITTALS (continued):

until an applicable copy of Product Data is in the installer’s possession.

- 1.13 **SAMPLES:** Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics, and a comparison of these characteristics between the final submittal and the component as delivered and installed. Where variations are inherent in the product, submit multiple units that show limits of the variations.

Refer to other Sections for Samples that illustrate details of assembly, fabrication techniques, workmanship, connections, operation and similar characteristics.

Refer to other Sections for Samples to be returned for incorporation in the Work. Such Samples must be undamaged at time of use. On the transmittal, indicate special requests regarding disposition of Sample submittals.

Sample sets may be used to obtain final acceptance of the construction associated with each set.

Preliminary submittals: Where Samples are for selection of characteristics from a range of choices, submit a full set of choices for the product. Preliminary submittals will be reviewed and returned indicating selection and other action.

PART 2 - PRODUCTS (Not Applicable).

PART 3 - EXECUTION (Not Applicable).

PART 4 - SCHEDULES

- 4.01 The following Submittal Schedule is for **REFERENCE ONLY**. Items listed may or may not be required for this project.

SUBMITTAL SCHEDULE		
SECTION	TYPE OF SUBMITTAL	DESCRIPTION
000610 - Performance Bond and Labor and Material Bond	Bonds	Performance Bond, Labor and Material Bond
000430 - List of Subcontractors	List	Subcontractors, Suppliers, Principal Manufactures
012900 - Application for Payment	Schedule of Values Application for Payment	Initial and Subsequent Initial and Subsequent
013100 - Project Coordination	List	Staff Names
013300 - Submittals	Construction Schedule Submittal Schedule Daily Construction Reports	
017700 - Project Closeout	Documents Certificate	Record Drawings, Specifications, Submittals, As-Builts, Maintenance Manuals, O & M Instructions OEF Final & Occupancy Inspection
022070 - Selective Demolition	Schedule	Demolition Schedule
313116 - Termite Control	Warranty	Soil Treatment Solution
02510 - Concrete Paving	Shop Drawings	Walkways/Curb Layout
033000 - Concrete	Shop Drawings	Formwork Reinforce Placement/Schedule

SECTION 013300 - SUBMITTALS (continued):

SUBMITTAL SCHEDULE		
SECTION	TYPE OF SUBMITTAL	DESCRIPTION
042000 - Unit Masonry	Product Data Field Mock-Up	Grout/Mortar, Joint Reinforcement Masonry Wall
042113 - Brick Masonry	Product Data Samples Field Mock-Up	Grout/Mortar, Joint Reinforcement Brick, Mortar Brick Wall
055000 - Metal Fabrication	Product Data Shop Drawings Certification	Assembly and Installation Instructions Metal Fabrication Metal and Steel Test Results
052100 – Metal Building	Shop Drawings	Sizes, Design Information
062000 - Finish Carpentry	Product Data Samples	
064023 - Interior Architectural Woodwork	Shop Drawings Samples	Casework Plastic Laminate, Hardware
071326 - Sheet Membrane Waterproofing	Product Data	Technical Data and Recommendations
072116 - Building Insulation	Product Data	Each Type of Insulation Required
076200 - Flashing and Sheet Metal	Product Data Guarantee	Roofing and Flashing Materials Maintenance Guarantee
074113 – Preformed wall and roof panels	Product Data Samples	Manufacturer=s Information
07900 - Joint Sealers	Product Data Samples Certification	Each Type Sealants Product Test Reports
081113 – Hollow Metal Doors and Frames	Shop Drawings Schedules	Frames
081416 - Flush Wood Doors	Product Data Shop Drawings Schedule	Wood Doors
083113 - Access Doors	Product Data	Doors
087100 - Finish Hardware	Schedule Product Hardware	Hardware
088000 - Glass and Glazing	Product Data Samples	Glass/Glazing Materials Glass
093000 - Tile	Product Data Samples	Tile and Grout Tile
095123 - Acoustical Ceilings	Product Data Samples	Panel/Suspension System
09650 - Resilient Flooring	Product Data Sample Maintenance Instructions Replacement Material	Tile and Base
099100 - Painting	Product Data Samples Mock-Up	Paint Paint Field Application

SECTION 013300 - SUBMITTALS (continued):

SUBMITTAL SCHEDULE		
SECTION	TYPE OF SUBMITTAL	DESCRIPTION
101000 - Markerboards, Chalkboards, Tackboards	Product Data Samples	Each Type of Visual Board Tackboard Fabric
101600 - Toilet Partitions	Product Data Shop Drawings Samples	Toilet Partitions Fabrication of Partitions Color and Solid Plastic Selection
089800 - Louvers and Vents	Product Data Shop Drawings Samples	Louvers and Vents Details Color Selection
104400 - Signage	Product Data Schedule Shop Drawings	Signage Sign Layout
102800 - Toilet and Bath Accessories	Product Data	Accessories
109900 - Miscellaneous Specialties	Product Data Shop Drawings	Each Item Installation Instructions Fabrication Details (where required)
111320 - Project Screens and T.V. Mounting Brackets	Product Data Shop Drawings	Screens and Monitor Mounts Installation Details
23010 - Mechanical General Provisions		
22400 - Plumbing		
26010 - Electrical General Provisions		

NOTE: Additional Submittals may be requested by the Architect/Engineer.

END OF SECTION 013300

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SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

- 1.01 **GENERAL**: This Section specifies requirements for quality control services. Quality control services include inspections and tests performed by independent agencies, governing authorities, as well as the Contractor.
- 1.02 **CONTRACTOR RESPONSIBILITIES**: Provide inspections and tests specified or required by governing authorities, except where they are the Owner's responsibility, or are provided by another entity; services include those specified to be performed by an independent agency not by the Contractor. Costs are included in the Contract.

The Contractor shall engage and pay for services of an independent agency, acceptable to the Architect/Engineer to perform inspections and tests specified as Quality Control services.

Retesting: The Contractor is responsible for retesting where results prove unsatisfactory and do not indicate compliance with Contract Documents, regardless of whether the original test was the Contractor's responsibility.

Cost of retesting construction revised or replaced by the Contractor is the Contractor's responsibility, where required tests were performed on original construction.

Associated Services: The Contractor shall cooperate with agencies performing inspections or tests and provide auxiliary services as requested. Notify the agency in advance of operations to permit assignment of personnel. Auxiliary services include but are not limited to:

Provide access to the Work and furnish incidental labor and facilities necessary to facilitate inspections and tests.

Take representative samples of materials that require testing or assist the agency in taking samples.

Provide facilities for storage and curing of samples and deliver samples to testing laboratories. Provide a preliminary design mix proposed for use for material mixes that require control by the testing agency.

Provide security and protection of samples and test equipment at the Project site.

- 1.03 **DUTIES OF THE TESTING AGENCY**: The agency engaged to perform inspections and testing of materials and construction shall cooperate with the Architect and Contractor in performance of its duties and provide qualified personnel to perform inspections and tests.

The agency shall notify the Architect and Contractor promptly of deficiencies observed during performance of its services.

The agency is not authorized to release, revoke, alter or enlarge requirements of the Contract Documents, or approve or accept any portion of the Work.

- 1.04 **COORDINATION**: The Contractor and each agency engaged to perform inspections and tests shall coordinate the sequence of activities to accommodate services with a minimum of delay. The Contractor and each agency shall coordinate activities to avoid removing and replacing construction to accommodate

inspections and tests.

The Contractor is responsible for scheduling inspections, tests, taking samples and similar activities.

- 1.05 SUBMITTALS: The testing agency shall submit a certified written report of each inspection and test to the Architect, in duplicate, unless the Contractor is responsible for the service. If the Contractor is responsible, submit a certified written report of each inspection and test through the Contractor, in triplicate, who shall send two (2) copies to the Architect.

Submit additional copies of each report to the governing authority, when the authority so directs.

Report Data: Written reports of each inspection or test shall include, but not be limited to:

- Date of issue.
- Project title and number.
- Name, address and telephone number of testing agency.
- Testing agency qualifications.
- Dates and locations of samples and tests or inspections.
- Names of individuals making the inspection or test.
- Designation of the Work and test method including applicable industry standards and/or codes.
- Identification of product and Specification Section.
- Complete inspection or test data.
- Test results and an interpretations of test results.
- Ambient conditions at the time of sample-taking and testing.
- Comments or professional opinion as to whether inspected or tested Work complies with Contract Document requirements.
- Name and signature of laboratory inspector or person reviewing results.
- Recommendations on retesting.

- 1.06 QUALIFICATION FOR SERVICE AGENCIES: Engage inspection and testing agencies which are prequalified as complying with "Recommended Requirements for Independent Laboratory Qualification" by the American Council of Independent Laboratories and specialize in the types of inspections and tests to be performed.

Each inspection and testing agency engaged shall be authorized to operate in the State in which the Project is located.

- 1.07 REPAIR AND PROTECTION: Upon completion of inspection and testing repair damaged construction and restore substrates and finishes to eliminate deficiencies. Comply with requirements for "Cutting and Patching."

Protect construction exposed by or for quality control service activities and protect repaired construction.

The Contractor is responsible for repair and protection regardless of the assignment of responsibility for inspection and testing.

END OF SECTION 014000

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SECTION 014200 - DEFINITIONS AND STANDARDS

PART 1 - GENERAL

1.01 **DEFINITIONS:** Basic Contract definitions are included in the General Conditions.6

- A. **Indicated** refers to graphic representations, notes or schedules on Drawings, or Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help locate the reference.
- B. **Directed:** Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by the Architect", "requested by the Architect", and similar phrases. No implied meaning shall be interpreted to extend the Architect's responsibility into the Contractor's supervision of construction.
- C. **Approve,** used in conjunction with action on submittals, applications, and requests, is limited to the Architect's duties and responsibilities stated in General and Supplementary Conditions. Approval shall not release the Contractor from responsibility to fulfill Contract requirements.
- D. **Regulation** includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, and rules, conventions and agreements within the construction industry that control performance of the Work, whether lawfully imposed by authorities having jurisdiction or not.
- E. **Furnish** means "supply and deliver, ready for unloading, unpacking, assembly, installation, and similar operations."
- F. **Install** describes operations at the site including "unloading, unpacking, assembly, erection, anchoring, applying, working to dimension, protecting, cleaning and similar operations."
- G. **Provide** means "furnish and install, complete and ready for use."
- H. **Installer:** "Installer" is the Contractor, or an entity engaged by the Contractor, as an employee, subcontractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform. The term "experienced," when used with "Installer" means having a minimum of 5 previous Projects similar in size to this Project, and familiar with the precautions required, and with requirements of the authority having jurisdiction.
- I. **Project Site** is the space available for construction activities, either exclusively or with others performing other construction on the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land upon which the Project is to be built.
- J. **Testing Laboratories:** A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.

1.02 **SPECIFICATION FORMAT:** These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 48-Division format and MASTERFORMAT 2004 numbering system. Language used in the Specifications is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and where the context so indicates.

SECTION 014200 - DEFINITIONS AND STANDARDS (continued):

Imperative language is used generally. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text subjective language is used to describe responsibilities which must be fulfilled indirectly by the Contractor, or by others when so noted. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.

- 1.03 **ASSIGNMENT OF SPECIALISTS:** Certain construction activities shall be performed by specialists, recognized experts in the operations to be performed. Specialists must be engaged for those activities, and assignments are requirements over which the Contractor has no option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.
- 1.04 **DRAWING SYMBOLS:** Where not otherwise noted, symbols are defined by "Architectural Graphic Standards", published by John Wiley & Sons, Inc., eighth edition.
- 1.05 **MECHANICAL/ELECTRICAL DRAWINGS:** Graphic symbols for mechanical and electrical Drawings are defined in a graphic symbol legend on the Construction Documents and are aligned with symbols recommended by ASHRAE. Where appropriate, they are supplemented by symbols recommended by technical associations. Refer instances of uncertainty to the Architect for clarification before proceeding.
- 1.06 **APPLICABILITY OF STANDARDS:** Except where the Contract Documents include more stringent requirements, applicable industry standards have the same force and effect as if bound or copied into Contract Documents. Such standards are part of the Contract Documents by reference. Individual Sections indicate standards the Contractor must keep available at the Project Site.
- 1.07 **PUBLICATION DATES:** Where the date of issue of a referenced standard is not specified, comply with the standard in effect as of date of Contract Documents.

Updated Standards: Submit a Change Order proposal where an applicable standard has been revised and reissued after the date of the Contract Documents and before performance of Work. The Architect will decide whether to issue a Change Order to proceed with the updated standard.

- 1.08 **CONFLICTING REQUIREMENTS:** Where compliance with two or more standards that establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced. Refer uncertainties as to which quality level is more stringent to the Architect for a decision before proceeding.

Minimum Quantities or Quality Levels: The quantity or quality shown or specified is the minimum to be provided or performed. Indicated values are minimum or maximum values, as appropriate for the requirements. Refer instances of uncertainty to the Architect for decision before proceeding.

- 1.09 **COPIES OF STANDARDS:** Each entity engaged on the Project shall be familiar with standards applicable to that activity. Copies of applicable standards are not bound with the Contract Documents.

Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

Although copies of standards needed for enforcement of requirements may be part of submittals, the Architect reserves the right to require submittal of additional copies for enforcement of requirements.

- 1.10 **ABBREVIATIONS AND NAMES:** Where acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable. Refer to the "Encyclopedia of Associations," published by Gale Research Co., available in most libraries.

SECTION 014200 - DEFINITIONS AND STANDARDS (continued):

- 1.11 PERMITS, LICENSES, AND CERTIFICATES: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the Work.

END OF SECTION 014200

SECTION 014200 - DEFINITIONS AND STANDARDS (continued):

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SECTION 015000 - TEMPORARY FACILITIES

PART 1 - GENERAL

- 1.01 **RELATED DOCUMENTS:** Drawings and General Provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this section.
- 1.02 **SUMMARY:** This Section specifies temporary services and facilities, including utilities, construction and support facilities, security and protection. Provide facilities ready for use. Maintain, expand and modify as needed. Remove when no longer needed or replaced by permanent facilities.
- Temporary facilities required include but are not limited to water service and distribution, temporary electric power and light, storage sheds, sanitary facilities and temporary enclosures, barricades, warning signs, lights and environmental protection.
- 1.03 **USE CHARGES:** Cost or use charges for temporary facilities are not chargeable to the Owner or Architect and will not be accepted as a basis of claims for a Change Order.
- 1.04 **REGULATIONS:** Comply with all applicable local, state, and federal laws and regulations.
- 1.05 **STANDARDS:** Comply with NFPA Code 241, "Building Construction and Demolition Operations", ANSI-A10 Series standards for "Safety Requirements for Construction and Demolition", and NECA Electrical Design Library "Temporary Electrical Facilities" and OSHA.
- A. Refer to "Guidelines for Bid Conditions for Temporary Job Utilities and Services", prepared by AGC and ASC.
- B. **Electrical Service:** Comply with NEMA, NECA and UL standards and regulations for temporary electric service. Install service in compliance with National Electric Code (NFPA 70).
- 1.06 **INSPECTIONS:** Arrange for authorities having jurisdiction to inspect and test each temporary utility before use. Obtain required certifications and permits.
- 1.07 **CONDITIONS OF USE:** Keep facilities clean and neat. Operate in a safe and efficient manner. Take necessary fire prevention measures. Do not overload or permit facilities to interfere with progress. Do not allow hazardous, dangerous or unsanitary conditions, or public nuisances to develop or persist on the site.
- 1.08 **MATERIALS AND EQUIPMENT:** Provide new materials and equipment; if acceptable to the Architect, undamaged previously used materials and equipment in serviceable condition may be used. Provide materials and equipment suitable for the use intended.
- A. **Tarpaulins:** Waterproof, fire-resistant, UL labeled tarpaulins with flame-spread rating of 15 or less. For temporary enclosures provide translucent nylon reinforced laminated polyethylene or polyvinyl chloride fire retardant tarpaulins.
- B. **Temporary / Construction Fencing:** 11-gage, galvanized 2-inch, chain link fabric fencing 6-feet high with galvanized steel pipe posts, 1-1/2" I.D. for line posts and 2-1/2" I.D. for corner posts.
- 1.09 **TEMPORARY UTILITY INSTALLATION:** Engage the local utility company to install temporary service or connect to existing service. Arrange for a time when service can be interrupted to make connections. Provide adequate capacity at each stage of construction. Combined use of temporary and existing power and water is anticipated for this project.

SECTION 015000 - TEMPORARY FACILITIES (continued):

- A. Water Service: Install water service and distribution piping of sizes and pressures adequate for construction. Sterilize water piping prior to use.
- B. Electric Power Service: **Existing service may be used OR**
Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear. Install service underground, if possible.
1. Power Distribution System: Install wiring overhead and rise vertically where least exposed to damage.
 2. Electrical Outlets: Provide properly configured NEMA polarized outlets. Provide outlets equipped with ground-fault circuit interrupters, reset button and pilot light, for connection of power tools and equipment.
 3. Electrical Power Cords: Provide grounded extension cords; use "hard-service" cords where exposed to traffic.
- C. Lighting: Provide temporary lighting with local switching to fulfill security requirements and provide illumination for construction operations and traffic conditions.
1. Lamps and Light Fixtures: Provide general service incandescent lamps. Provide guard cages or tempered glass enclosures, where exposed to breakage. Provide exterior fixtures where exposed to moisture.
- D. Telephones: Provide temporary telephone service for personnel engaged in construction. Post a list of important telephone numbers.
- E. Sewers and Drainage: If sewers are available, provide temporary connections to remove effluent. If sewers are not available or cannot be used, provide drainage ditches, or similar facilities.
- Filter out construction debris and other contaminants that might clog sewers or pollute waterways before discharge. Provide earthen embankments and similar barriers in and around excavations and subgrade construction to prevent flooding by runoff of storm water from heavy rains.
Comply with all City and County requirements for storm water runoff.

1.10 TEMPORARY CONSTRUCTION AND SUPPORT FACILITIES INSTALLATION: Locate for easy access. Maintain facilities until Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, if acceptable to the Owner.

- A. Temporary Roads and Paved Areas: Construct and maintain temporary roads and paved areas adequate for construction operations. Locate temporary roads where they do not interfere with construction activities.
- B. Dust Control: If, in the opinion of the Owner or Architect it is necessary to control dust during construction period, the Contractor shall furnish and spread water or calcium chloride at points where dust is a nuisance or as directed by the Architect, at no additional cost to the Owner.

SECTION 015000 - TEMPORARY FACILITIES (continued):

- C. Field Office: Provide field offices of size required to accommodate personnel, including telephone and fax line. In addition, provide a 3' x 5' desk, table and stool for use by the Architect. Field office is to be provided with air conditioning. Keep clean and orderly for use for small progress meetings.
 - D. Storage and Fabrication Sheds: Install sheds, equipped to accommodate materials and/or existing equipment involved. Sheds may be open shelters.
 - E. Sanitary facilities include temporary toilets and drinking water fixtures. Comply with regulations and health codes for the type, number, location, operation and maintenance of fixtures. Install where facilities will best serve the Project. Provide toilet tissue, paper towels, paper cups and similar disposable materials for each facility. Provide covered waste containers for used material.
 - F. Toilets: Install self-contained single-occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material. Use of pit-type privies will not be permitted. Under no circumstances will construction personnel use existing toilet facilities.
 - G. Drinking Water Facilities: Provide containerized tap-dispenser type drinking water units.
 - H. Dewatering Facilities and Drains: For temporary drainage and dewatering operations not associated with construction, comply with requirements of applicable Division-2 Sections. Where feasible, utilize the same facilities. Maintain excavations and construction free of water.
 - I. Temporary Enclosures: Provide temporary enclosure for protection of construction from exposure, foul weather, other construction operations and similar activities. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions.

Install tarpaulins securely, with incombustible framing. Close openings through floor or roof decks and horizontal surfaces with load-bearing construction.
 - J. Collection and Disposal of Waste: Collect waste daily. Comply with NFPA 241 for removal of combustible waste. Enforce requirements strictly. Handle hazardous, dangerous, or unsanitary waste materials separately from other waste by containerizing properly. Dispose in a lawful manner.
 - K. Project Identification and Temporary Signs: Prepare project identification signs on grade B-B High Density Overlay Plywood; install where indicated by Architect. Support on framing of preservative treated wood or steel. Engage an experienced sign painter to apply graphics. Refer to project identification sign drawing at end of this section (Attachment 015000-1).
- 1.11 SECURITY AND PROTECTION FACILITIES INSTALLATION: Except for use of permanent fire protection as soon as available, do not change from use of temporary security and protection facilities to permanent facilities until Substantial Completion.
- A. Fire Protection: Until fire protection is supplied by permanent facilities, install and maintain temporary fire protection of types needed to protect against predictable and controllable fire losses. Comply with NFPA 10 "Standard for Portable Fire Extinguishers," and NFPA 241 "Standard for Safeguarding Construction, Alterations and Demolition Operations." Consideration should be given to existing fire hydrant locations.
 - B. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "A" fire extinguishers for temporary offices and similar spaces. In other locations provide hand-carried, portable, UL-rated, class "ABC" dry chemical extinguishers. Locate fire extinguishers where effective for the intended purpose.

SECTION 015000 - TEMPORARY FACILITIES (continued):

Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities, and other access routes for fighting fires. Prohibit smoking in hazardous fire exposure areas.

Store combustible materials in containers in fire-safe locations.

Provide supervision of welding operations, combustion type temporary heating units, and sources of fire ignition.

- C. Barricades, Warning Signs and Lights: Comply with standards and code requirements for erection of barricades. Paint appropriate warning signs to inform personnel and the public of the hazard being protected against. Where needed provide lighting, including flashing lights. Temporary, portable or metal barricades and structures shall be constructed over all open trench areas intersecting student walkways. Walkway structures over trenches shall be of sturdy construction with handrails and be handicap accessible.
 - D. Security Enclosure and Lockup: Install temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism and theft. Where materials and equipment must be stored, provide a secure lockup.
 - E. Enclosure Fence: When excavation begins, install an enclosure fence with lockable entrance gates where indicated, or if not indicated, enclose the entire site or the portion sufficient to accommodate operations. Provide open-mesh, chain-link fencing with posts set in a compacted mixture of gravel and earth.
 - F. Environmental Protection: Operate temporary facilities and conduct construction by methods that comply with environmental regulations, and minimize the possibility that air, waterways and subsoil might be contaminated or polluted. Restrict use of noise making tools and equipment to hours that will minimize complaints.
- 1.12 OPERATION: Enforce strict discipline in use of temporary facilities. Limit availability to intended use to minimize abuse. Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and the elements.

Maintain operation of enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour day basis to achieve indicated results and to avoid damage.

Prevent piping from freezing. Maintain markers for underground lines. Protect from damage during excavation operations.

- 1.13 TERMINATION AND REMOVAL: Remove each facility when the need has ended, or replaced by a permanent facility, or no later than Substantial Completion. Complete or restore construction delayed because of interference with the facility. Repair damaged Work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

Temporary facilities are property of the Contractor.

At Substantial Completion, renovate permanent facilities used during the construction period, including but not limited to:

Replace air filters and clean inside of ductwork and housings.

Replace worn parts and parts subject to unusual operating conditions.

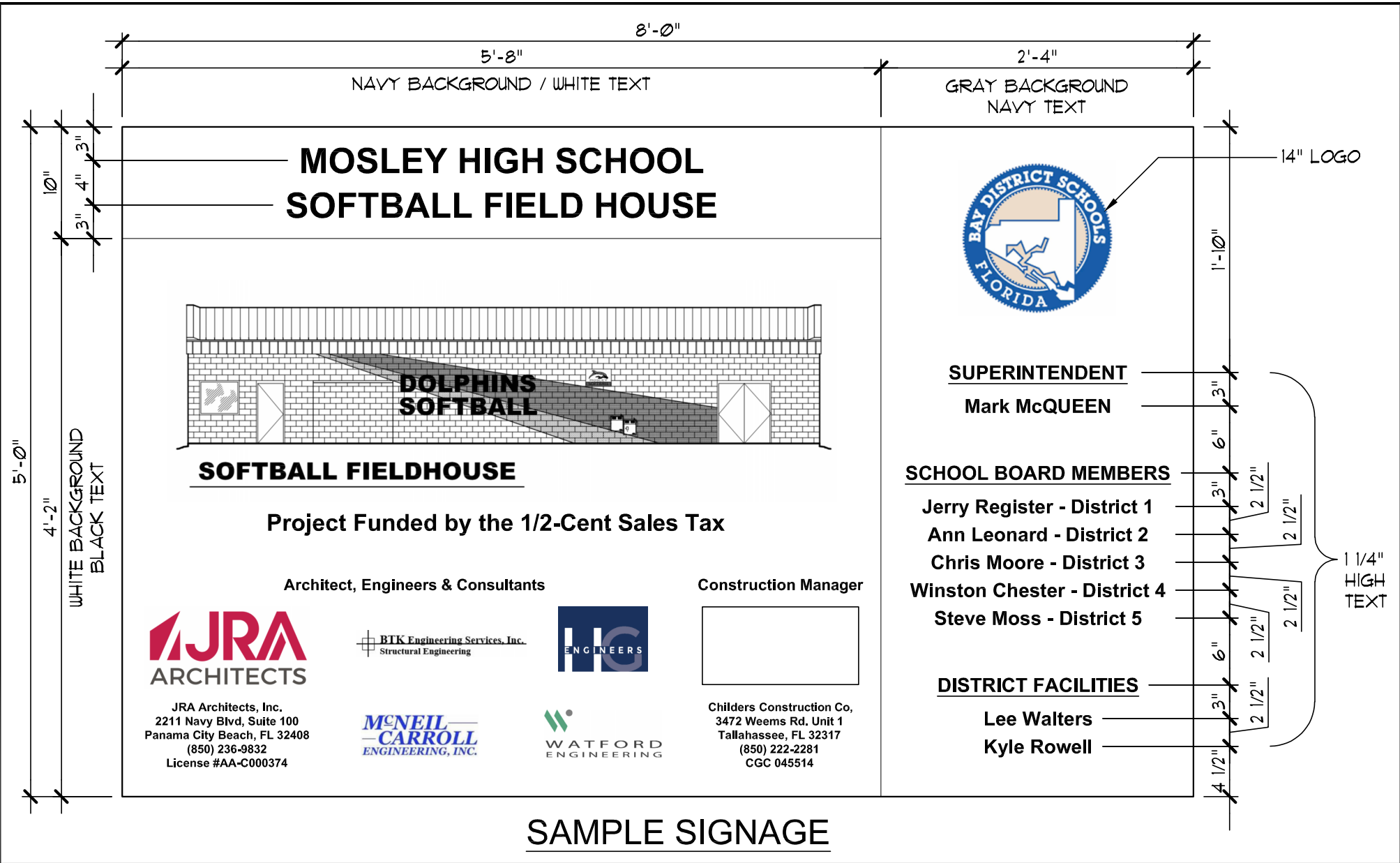
Replace burned out lamps.

SECTION 015000 - TEMPORARY FACILITIES (continued):

END OF SECTION 015000

SECTION 015000 - TEMPORARY FACILITIES (continued):

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SAMPLE SIGNAGE



JRA Architects, Inc.

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Panama City Beach, FL 32408

(850) 236-9832

NOTES :

1. LETTERING STYLES SHALL BE ARIAL, UNLESS NOTED OTHERWISE.
2. ALL COLORS ARE TO BE SELECTED BY THE ARCHITECT
3. PLYWOOD SHALL BE 3/4" M.D.O. EXTERIOR GRADE OR OTHER DURABLE SIGNAGE MATERIAL AS APPROVED BY THE ARCHITECT.
4. CONTRACTOR SHALL FURNISH SIGN.
5. PROVIDE SHOP DRAWING LAYOUT FOR ARCHITECTS' REVIEW PRIOR TO PAINTING SIGN.
6. ARCHITECT TO SELECT LOCATION OF SIGN.

SECTION 015500 - MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.01 DEFINITIONS

- A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
- B. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
- C. "Named Products" are items identified by the manufacturer's product name, including make or model number or other designation, shown or listed in the manufacturer's published product literature that is current as of the date of the Contract Documents.
- D. "Materials" are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
- E. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.02 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
- B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturers or producer's nameplates or trademarks on exposed surfaces of products that will be exposed to view in occupied spaces or on the exterior.
- D. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.
- E. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface that is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data:

Name of product and manufacturer.

Model and serial number.

Capacity.

Speed.

Ratings.

SECTION 015500 - MATERIALS AND EQUIPMENT (continued):

F. Field marking for electrical, mechanical, plumbing and telecom locations:

1. All above ceiling electrical, mechanical, and plumbing shall have below ceiling labeling provided for some specific items IFF located above ceiling.
 - a. Electrical – any electrically powered motor or device other than junction boxes located in a concealed location above ceiling shall be labeled below ceiling. See labeling requirements in a separate section “Labeling”.
 - b. HVAC – HVAC equipment located above ceiling including but not limited to VAV, VRF, AHU, EF units, and valves shall be baled below ceiling so as to make them easily locatable from below ceiling. Identification should match plan call outs for the items such that plans may be utilized in conjunction with labeling to locate and maintain each item.
 - c. Plumbing – all valves located above ceiling shall be labeled below ceiling. Above ceiling valve shall be marked with permanently affixed TAG indicating what areas or items are served by the valve.
 - d. Telecomm – see above ceiling labeling requirements per specification section on telecomm devices. Any signal repeaters, or other data / telecomm equipment located above ceiling shall be labeled on the ceiling below for easy identification in the future.
2. Labels shall be 1” x 4” in size and permanently attached to underside of drywall or permanently affixed to the acoustic ceiling grid within 2 feet of the above ceiling item being labeled.
3. Labels shall be hard plastic.
4. Lettering shall be minimum 12 font engraved into labels.
5. Color coding of labels shall be as follows:
 - a. Red = electrical & Fire
 - b. Yellow = gas
 - c. Blue = water & sewer
 - d. Green = HVAC
 - e. Orange – telecomm
 - f. *Other colors as mutually agreed by owner and architect to be added*

1.03 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
- B. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses; and to prevent overcrowding of construction spaces.
- C. Deliver products to the site in undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
- D. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
- E. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
- F. All new installed materials shall be sealed from moisture penetration at the end of each day.

SECTION 015500 - MATERIALS AND EQUIPMENT (continued):

PART 2 - PRODUCTS

2.01 PRODUCT SELECTION

- A. **General Product Requirements:** Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation. Discontinued items will not be accepted.
1. Provide products complete with accessories, trim, finish, safety guards, and other devices and details needed for a complete installation and the intended use and effect.
 2. **Standard Products:** Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.
- B. **Product Selection Procedures:** The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
1. **Semi proprietary Specification Requirements:** Where Specifications name two or more products or manufacturers, provide one of the products indicated.

Where Specifications specify products or manufacturers by name, accompanied by the term "**or equal**" or "**or approved equal**", comply with the Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
 2. **Descriptive Specification Requirements:** Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.
 3. **Performance Specification Requirements:** Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.

Manufacturer's recommendations may be contained in published product literature or by the manufacturer's certification of performance.
 4. **Compliance with Standards, Codes, and Regulations:** Where Specifications only require compliance with an imposed code, standard, or regulation, select a product that complies with the standards, codes, or regulations specified.
 5. **Visual Matching:** Where Specifications require matching an established Sample (match existing), the Architect's decision will be final on whether a proposed product matches satisfactorily.

Where no product is available within the specified category, matches satisfactorily and complies with other specified requirements; comply with provisions of the Contract Documents concerning "substitutions" (Section 01631 - Product Substitutions) for selection of a matching product in another product category.
 6. **Visual Selection:** Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, patterns, textures ..." or a similar phrase, select a product and manufacturer that complies with specified requirements. The Architect will select the color, pattern, and texture from the product line selected. Any selections within the product line which are unavailable, no longer make or superseded by another should be so marked.

SECTION 015500 - MATERIALS AND EQUIPMENT (continued):

PART 3 - EXECUTION

3.01 **INSTALLATION OF PRODUCTS**

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

END OF SECTION 015500

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes general protection and pruning of existing trees and plants that are affected by execution of the Work, whether temporary or permanent construction.
- B. Related Sections:
 - 1. Section 015000 "Temporary Facilities and Controls" for temporary site fencing.
 - 2. Section 311000 "Site Clearing" for removing existing trees and shrubs.

1.3 DEFINITIONS

- A. Caliper: Diameter of a tree's trunk measured at breast height using a tree caliper or diameter tape. The caliper of a group or cluster of trees shall be the average of the smallest and largest diameters.
- B. Plant-Protection Zone: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and indicated on Drawings.
- C. Tree-Protection Zone: Area surrounding individual trees or groups of trees to be protected during construction and defined by a circle concentric with each tree with a radius 1.5 times the diameter of the drip line unless otherwise indicated.
- D. Vegetation: Trees, shrubs, groundcovers, grass, and other plants.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: For each type of the following:
 - 1. Organic Mulch: 1-quart (1-L) volume of organic mulch; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch, upon request.
 - 2. Protection-Zone Fencing: Assembled Samples of manufacturer's standard size made from full-size components, upon request.
 - 3. Protection-Zone Signage: Full-size Samples of each size and text, ready for installation, upon request.
- C. Tree Pruning Schedule: Written schedule detailing scope and extent of pruning of trees to remain that interfere with or are affected by construction.

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION (Continued)

1. Species and size of tree.
2. Location on site plan. Include unique identifier for each.
3. Reason for pruning.
4. Description of pruning to be performed.
5. Description of maintenance following pruning.

- D. Qualification Data: For qualified arborist and tree service firm.
- E. Certification: From arborist, certifying that trees indicated to remain have been protected during construction according to recognized standards and that trees were promptly and properly treated and repaired when damaged.
- F. Maintenance Recommendations: From arborist, for care and protection of trees affected by construction during and after completing the Work.
- G. Existing Conditions: Documentation of existing trees and plantings indicated to remain, which establishes preconstruction conditions that might be misconstrued as damage caused by construction activities.
1. Use sufficiently detailed photographs or videotape.
 2. Include plans and notations to indicate specific wounds and damage conditions of each tree or other plants designated to remain.

1.5 QUALITY ASSURANCE

- A. Arborist Qualifications: The person responsible for the care and protection of the trees and vegetation shall meet at least one of the following: Certified Arborist as certified by ISA, Certified Arborist-Municipal Specialist as certified by ISA, Licensed arborist in jurisdiction where Project is located, Current member of ASCA or Registered Consulting Arborist as designated by ASCA.
- B. Tree Service Firm Qualifications: An experienced tree service firm that has successfully completed temporary tree and plant protection work similar to that required for this Project and that will assign an experienced, qualified arborist to Project site during execution of the Work.
- C. Preinstallation Conference: Conduct on site preconstruction meeting.
1. Review methods and procedures related to temporary tree and plant protection including, but not limited to, the following:
 - a. Construction schedule. Verify availability of materials, personnel, and equipment needed to make progress and avoid delays.
 - b. Enforcing requirements for protection zones.
 - c. Arborist's responsibilities.
 - d. Field quality control.

1.6 PROJECT CONDITIONS

- A. The following practices are prohibited within protection zones:
1. Storage of construction materials, debris, or excavated material.
 2. Parking vehicles or equipment.
 3. Foot traffic.
 4. Erection of sheds or structures.
 5. Impoundment of water.

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION (Continued)

6. Excavation or other digging unless otherwise indicated.
 7. Attachment of signs to or wrapping materials around trees or plants unless otherwise indicated.
- B. Do not direct vehicle or equipment exhaust toward protection zones.
- C. Prohibit heat sources, flames, ignition sources, and smoking within or near protection zones and organic mulch.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Topsoil: Natural or cultivated top layer of the soil profile or manufactured topsoil; containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 1 inch (25 mm) in diameter; and free of weeds, roots, and toxic and other nonsoil materials.
1. Obtain topsoil only from well-drained sites where topsoil is 4 inches (100 mm) deep or more; do not obtain from bogs or marshes.
- B. Topsoil: Project area topsoil shall be stockpiled and imported and/or manufactured topsoil shall comply with ASTM D 5268.
- C. Organic Mulch: Any mulch imported, placed and/or created on site shall be subject to owner approval due to its aesthetic qualities. The mulch shall also be free from deleterious materials and suitable as a top dressing for trees and shrubs, consisting of one of the following:
1. Type: Shredded hardwood, Ground or shredded bark or Wood and bark chips.
 2. Size Range: 3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum.
 3. Color: Natural, unless otherwise specified.
- D. Protection-Zone Fencing: Fencing fixed in position and meeting one of the following requirements. Previously used materials may be used when approved by Engineer.
1. Chain-Link Protection-Zone Fencing: Galvanized-steel, Polymer-coated steel or Polymer-coated galvanized-steel fencing fabricated from minimum 2-inch (50-mm) opening, 0.148-inch- (3.76-mm-) diameter wire chain-link fabric; with pipe posts, minimum 2-3/8-inch- (60-mm-) OD line posts, and 2-7/8-inch- (73-mm-) OD corner and pull posts with 0.177-inch- (4.5-mm-) diameter top tension wire and 0.177-inch- (4.5-mm-) diameter bottom tension wire; with tie wires, hog ring ties, and other accessories for a complete fence system.
 - a. Height: 4 feet (1.2 m) minimum.
 - b. Polymer-Coating Color: Engineer approved.
 2. Plywood Protection-Zone Fencing: Plywood framed with four 2-by-4-inch (50-by-100-mm) rails, with 4-by-4-inch (100-by-100-mm) preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart.
 - a. Height: 4 feet (1.2 m) minimum.
 - b. Plywood and Lumber: Comply with requirements in Section 061000 "Rough Carpentry."
 3. Wood Protection-Zone Fencing: Constructed of two 2-by-4-inch (50-by-100-mm) horizontal rails, with 4-by-4-inch (100-by-100-mm) preservative-treated wood posts spaced not more than 8 feet (2.4 m) apart, and lower rail set halfway between top rail and ground.

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION (Continued)

- a. Height: 4 feet (1.2 m) minimum.
 - b. Lumber: Comply with requirements in Section 061000 "Rough Carpentry."
4. Gates: Double swing access gates matching material and appearance of fencing, to allow for maintenance activities within protection zones; leaf width 36 inches (914 mm) minimum or as indicated.
- E. Protection-Zone Signage: Shop-fabricated, rigid plastic or metal sheet with attachment holes prepunched and reinforced; legibly printed with nonfading lettering and as follows:
1. Text: "TREE PROTECTION AREA - KEEP OUT!"
 2. Lettering: 3-inch- (75-mm-) high minimum, black characters on white background.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Erosion and Sedimentation Control: Examine the site to verify that temporary erosion- and sedimentation-control measures are in place. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross protection zones.
- B. For the record, prepare written report, endorsed by arborist, listing conditions detrimental to tree and plant protection.

3.2 PREPARATION

- A. Locate and clearly identify trees, shrubs, and other vegetation to remain or to be relocated. Flag and/or Tie a 1-inch (25-mm) blue-vinyl tape around each tree trunk at 54 inches (1372 mm) above the ground.
- B. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials. Protect root systems from ponding, eroding, or excessive wetting caused by dewatering operations.
- C. Tree-Protection Zones: Mulch areas inside tree-protection zones and other areas indicated.
1. Apply 4-inch (100-mm) average thickness of organic mulch. Do not place mulch within 6 inches (150 mm) of tree trunks.

3.3 TREE- AND PLANT-PROTECTION ZONES

- A. Protection-Zone Fencing: Install protection-zone fencing along edges of protection zones before materials or equipment are brought on the site and construction operations begin in a manner that will prevent people and animals from easily entering protected area except by entrance gates. Construct fencing so as not to obstruct safe passage or visibility at vehicle intersections where fencing is located adjacent to pedestrian walkways or in close proximity to street intersections, drives, or other vehicular circulation.
1. Chain-Link Fencing: Install to comply with ASTM F 567 and with manufacturer's written instructions.
 2. Posts: Set or drive posts into ground one-third the total height of the fence without concrete footings. Where a post is located on existing paving or concrete to remain, provide appropriate means of post support acceptable to Engineer.

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION (Continued)

3. Access Gates: Install gates and adjust to operate smoothly, easily, and quietly, free of binding, warp, excessive deflection, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Confirm that latches and locks engage accurately and securely without forcing or binding.
- B. Protection-Zone Signage: Install protection-zone signage in visibly prominent locations in a manner approved by Engineer. Install one sign spaced approximately every 20 feet (6 m) on protection-zone fencing, but no fewer than four signs with each facing a different direction.
- C. Maintain protection zones free of weeds and trash.
- D. Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Engineer.
- E. Maintain protection-zone fencing and signage in good condition as acceptable to Engineer and remove when construction operations are complete and equipment has been removed from the site.
 1. Do not remove protection-zone fencing, even temporarily, to allow deliveries or equipment access through the protection zone.
 2. Temporary access is permitted subject to preapproval in writing by arborist if a root buffer effective against soil compaction is constructed as directed by arborist. Maintain root buffer so long as access is permitted.

3.4 EXCAVATION

- A. General: Excavate at edge of protection zones and for trenches indicated within protection zones according to requirements in Section 312000 "Earth Moving."
- B. Trenching near Trees: Where utility trenches are required within protection zones, hand excavate under or around tree roots or tunnel under the roots by drilling, auger boring, or pipe jacking. Do not cut main lateral tree roots or taproots; cut only smaller roots that interfere with installation of utilities. Cut roots as required for root pruning.
- C. Redirect roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and redirect them without breaking. If encountered immediately adjacent to location of new construction and redirection is not practical, cut roots approximately 3 inches (75 mm) back from new construction and as required for root pruning.
- D. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

3.5 ROOT PRUNING

- A. Prune roots that are affected by temporary and permanent construction. Prune roots per the recommendation of an arborist or someone having first hand knowledge and experience in pruning the roots of the particular species of tree/plant in question.
 1. Cut roots manually by digging a trench and cutting exposed roots with sharp pruning instruments; do not break, tear, chop, or slant the cuts. Do not use a backhoe or other equipment that rips, tears, or pulls roots.
 2. Cut Ends: Treat the cut ends of a root per the recommendation of an arborist or someone having first hand knowledge and experience in pruning the roots of the particular species of tree/plant in question.

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION (Continued)

3. Temporarily support and protect roots from damage until they are permanently redirected and covered with soil.
 4. Cover exposed roots with burlap and water regularly.
 5. Backfill as soon as possible according to requirements in Section 312000 "Earth Moving."
- B. Root Pruning at Edge of Protection Zone: Prune roots as close as possible to the edge of the protection zone, by cleanly cutting all roots to the depth of the required excavation.
- C. Root Pruning within Protection Zone: Clear and excavate by hand to the depth of the required excavation to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.
- 3.6 CROWN PRUNING
- A. Prune branches that are affected by temporary and permanent construction. Prune branches as follows:
1. Prune trees to remain to compensate for root loss caused by damaging or cutting root system. Provide subsequent maintenance during Contract period as recommended by arborist.
 2. Pruning Standards: Prune trees according to ANSI A300 (Part 1).
 3. Cut branches with sharp pruning instruments; do not break or chop.
 4. Do not apply pruning paint to wounds.
- B. Chip removed branches and spread over areas identified by owner or stockpile in areas approved by owner or dispose of off-site.
- 3.7 REGRADING
- A. Lowering Grade: Where new finish grade is indicated below existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- B. Lowering Grade within Protection Zone: Where new finish grade is indicated below existing grade around trees, slope grade away from trees as recommended by arborist unless otherwise indicated.
1. Root Pruning: Prune tree roots exposed by lowering the grade. Do not cut main lateral roots or taproots; cut only smaller roots. Cut roots as required for root pruning.
- C. Raising Grade: Where new finish grade is indicated above existing grade around trees, slope grade beyond the protection zone. Maintain existing grades within the protection zone.
- D. Minor Fill within Protection Zone: Where existing grade is 2 inches (50 mm) or less below elevation of finish grade, fill with topsoil. Place topsoil in a single uncompacted layer and hand grade to required finish elevations.
- 3.8 FIELD QUALITY CONTROL
- A. Inspections: Engage a qualified arborist to direct plant-protection measures in the vicinity of trees, shrubs, and other vegetation indicated to remain and to prepare inspection reports.
- 3.9 REPAIR AND REPLACEMENT
- A. General: Repair or replace trees, shrubs, and other vegetation indicated to remain or be relocated that are damaged by construction operations, in a manner approved by Engineer.

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION (Continued)

1. Submit details of proposed root cutting and tree and shrub repairs.
 2. Have arborist perform the root cutting, branch pruning, and damage repair of trees and shrubs.
 3. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
 4. Perform repairs within 24 hours.
 5. Replace vegetation that cannot be repaired and restored to full-growth status, as determined by Engineer.
- B. Trees: Remove and replace trees indicated to remain that are, in the opinion of an arborist, in unhealthy condition or are damaged during construction operations that an arborist determines are incapable of restoring to normal growth pattern.
1. Replacement trees shall be provided according to the rules and regulations of the governing development jurisdiction, with respect to size, caliper, species, quantity, quality, etc.
 2. Plant and maintain new trees as specified in Section 329300 "Plants."
- C. Soil Aeration: Where directed by Engineer, aerate surface soil compacted during construction. Aerate 10 feet (3 m) beyond drip line and no closer than 36 inches (900 mm) to tree trunk. Drill 2-inch- (50-mm-) diameter holes a minimum of 12 inches (300 mm) deep at 24 inches (600 mm) o.c. Backfill holes with an equal mix of augered soil and sand.
- 3.10 DISPOSAL OF SURPLUS AND WASTE MATERIALS
- A. Disposal: Remove excess excavated material, displaced trees, trash and debris, and legally dispose of them off Owner's property.

END OF SECTION 015639

SECTION 015639 - TEMPORARY TREE AND PLANT PROTECTION (Continued)

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 015719 - EROSION CONTROL AND ENVIRONMENTAL PROTECTION

1.1 INTENT

It is the intent of these specifications to provide supplemental information to the contents of the construction drawings on the quality of materials, execution, measurement, etc. These specifications are general in nature and may contain products and requirements which are not applicable to the project. Discrepancies between these specifications and the construction drawings, either imagined or real, shall be brought to the attention of the Contracting officer for clarification.

1.2 DESCRIPTION OF WORK

Comply with the provisions of the following codes and standards, except as otherwise shown or specified:

"Standard Specifications for Road and Bridge Construction", Florida Department of Transportation, latest edition...

"Roadway and Traffic Design Standards", Florida Department of Transportation, latest edition.

"American Society for Testing and Materials (ASTM) Publications" as follow:

D 123-87	Standard Terminology Relating to Textiles
D 1683-81	Failure in Sewn Seams of Woven Fabrics
D 2487-83	Test Method for Classification of Soils for Engineering Purposes
D 3786-80	Standard Test Method for Mullen Burst Strength
D 3787-80	Bursting Strength of Knitted Goods - Constant-Rate-of- Traverse (CRT) Ball Burst
D 4439-87	Standard Terminology for Geotextiles
D 4533-85	Standard Test Method for Trapezoid Tearing Strength of Geotextiles
D 4632-86	Standard Test Method for Breaking Load and Elongation of Geotextiles (Grab Method)
VTM-51-79	Filtration Efficiency
VTM-51-79	Slurry Flow Rate

Certification: The contractor shall be responsible for providing the required material certifications prior to construction. Failure to provide certification may result in rejection of the material and replacement at no cost to the Owner.

Testing: An independent testing and inspection service will not be required for the work of this section.

1.3 SUBMITTALS

Material Certificates: Provide copies of materials certificates signed by material producer and Contractor, certifying that each material item complies with or exceeds specified requirements. When test requirements are specified, the contractor shall supply results performed by a certified testing laboratory.

1.4 TEMPORARY EROSION CONTROL (VEGETATION AND COVERINGS)

General: Temporary erosion control features shall consist of, but not be limited to, temporary grassing, temporary sodding, temporary mulching, sandbagging, artificial coverings, berms, and baled hay or straw.

SECTION 015719 - EROSION CONTROL AND ENVIRONMENTAL PROTECTION (continued)

Temporary Grassing: Temporary grassing shall be as specified in Section 13 except as modified herein. Perennial grass seed may be omitted if permanent erosion control will be placed prior to death of annual grass.

Temporary Sod: Sod shall be as specified in Section 12.

Temporary Mulch: Mulch shall be as specified in Section 13.

Sandbagging: Sandbagging shall consist of furnishing and placing sandbags in configurations, so as to control erosion and siltation.

Artificial Coverings: This work shall consist of furnishing and applying fiber mats, netting, plastic sheeting, or other approved covering to the earth surfaces.

Baled Hay or Straw: This work shall consist of construction of baled hay or straw dams to protect against downstream accumulations of silt. The baled hay or straw dams shall be constructed in accordance with the details shown in the construction drawings or, when details are not shown, in accordance with the FDOT Standard Index No. 102.

1.5 TEMPORARY EROSION CONTROL (SILT FENCES)

General: Temporary erosion control features shall consist of, but not be limited to, silt fences and staked turbidity barriers. The work shall consist of furnishing, installing, maintaining, and removing temporary fences and barriers in accordance with the manufacturer's recommendations, these specifications, the details shown on the plans, or, when details are not shown, in accordance with the FDOT Standard Index No. 102 & 103. The barrier type(s) will be at the Contractor's option unless otherwise specified in the plans.

Silt Fence: Silt fence or sediment control fence shall consist of a geotextile fabric attached to posts. The geotextile fabric shall be a woven or non-woven fabric as specified herein. Posts shall be a minimum length of five feet rough or surfaced four-inch by four-inch wood, three-inch minimum diameter wood or steel at least 1.33 pounds per linear foot. When called for, wire reinforcement shall be poultry mesh, a minimum height of 36 inches, 20 gauge wire minimum, with a mesh spacing of one inch. As an alternative, Type A fence conforming to Section 966, FDOT Standard Specifications, may be used.

Staked Turbidity Barrier: In addition to the requirements for a temporary silt fence contained herein, the fabric used for staked turbidity barrier shall have a double stitched hem at the top of the fabric into which has been sewn a braided nylon cord with a minimum diameter of 1/8 inch running the full length of that section of fabric. Supports for staked turbidity barriers shall be a minimum length of three feet seasoned two-inch by four-inch wood, 2-1/2 inch minimum diameter wood, or steel at least 1.33 pounds per linear foot.

1.6 GEOTEXTILES

Filter Fabric: The geotextile fabric shall be a woven or non-woven fabric consisting of long-chain polymeric filaments or yarns such as polypropylene, polyethylene, polyester, polyamides, or polyvinyl chloride formed into a stable network such that the filaments or yarns retain their relative position to each other. The base plastic shall contain stabilizers and/or inhibitors to make the filaments resistant to deterioration from ultraviolet light, heat exposure, and commonly encountered chemicals. The edges of the fabric shall be selvaged or otherwise finished to prevent the outer yarn from pulling away from the fabric.

The fabric shall conform to the following physical requirements:

PROPERTIES TEST METHOD ACCEPTABLE VALUES

SECTION 015719 - EROSION CONTROL AND ENVIRONMENTAL PROTECTION (continued)

Seam Strength (min)	ASTM D 1683	120 lbs.
Mullen Burst Strength (min)	ASTM D 3786	200 psi
Puncture Strength	ASTM D 3787	60 lbs.(min)
Trapezoidal Tear Strength (min)	ASTM D 4533	50 lbs.
Grab Tensile Strength (min)	ASTM D 4632	120 lbs.
Elongation (max)	ASTM D 4632	25%
Filtration Efficiency (min)	VTM-51-79	75%
Slurry Flow Rate (min)	VTM-51-79	0.3 gpm/sf

Seams: The seams of the fabric shall be sewn with thread of a material meeting the chemical requirements for the fabric. The minimum seam strength shall comply with the property requirements contained herein.

Shipment and Storage: During shipment and periods of storage, the geotextile shall be protected from direct sunlight, ultra-violet rays, temperatures greater than 140 degrees Fahrenheit, mud, dirt, dust, and debris. Stockpiled materials shall be kept covered at all times.

1.7 **EXECUTION**

General: The installation of temporary erosion control features shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the contract.

The Contractor shall take sufficient precautions to prevent pollution of streams, canals, lakes, reservoirs, and other water impoundments, with fuels, oils, bitumen's, calcium chloride, or other harmful materials. Also, he shall conduct and schedule his operations so as to avoid pollution or siltation of such streams, etc.

Except as necessary for construction, excavated material shall not be deposited in rivers, streams, canals, or impoundments, or in an position close enough thereto to be washed away by high water or runoff.

Where de-watering methods are used, the water shall be treated by one or more of the following methods prior to discharge off-site or into environmental areas: pumping into grassed swales or appropriate vegetated areas, sediment basins, or confined by an appropriate enclosure such as siltation curtains when other methods are not considered appropriate.

The Contractor shall not disturb lands or waters outside the limits of construction as staked, except as may be Found necessary and authorized by the Contracting officer.

The locations of and methods of operation in all detention areas, excavation and stockpile areas, and disposal areas shall meet the approval of the Contracting officer as being such that erosion during and after completion of the work will not likely result in detrimental conditions, siltation's, or water pollution.

Limitation of Exposure or Erodible Earth: The Contractor shall limit the surface areas of unprotected erodible earth exposed by clearing and grubbing, excavation, or filling operations and shall provide immediate permanent or temporary erosion or pollution control measures to prevent contamination of any

SECTION 015719 - EROSION CONTROL AND ENVIRONMENTAL PROTECTION (continued)

river, stream, lake, tidal water, reservoir, canal, or other impoundment or to prevent detrimental effects on property outside the project and damage to the project. The limitation of area in which excavation and filling operations may be underway shall be commensurate with the contractor's capability and progress in keeping the finish grading, grassing, sodding, and other such permanent erosion control measures current in accordance with the accepted schedule.

Under no conditions shall the surface area or erodible earth exposed by clearing and grubbing operations or by excavation and filling operations exceed one-half acre without specific prior approval by the Contracting officer. This limitation applies separately to clearing and grubbing operations and excavation and filling operations.

The Contracting officer may increase or decrease the amount of surface area allowed to be exposed at any one time, on the basis of his analysis of conditions on the project.

Permanent erosion control features shall be incorporated into the project at the earliest practical time. Temporary erosion control features will be used to control erosion prior to the time it is practical to construct permanent control features or to provide immediate temporary control of erosion that develops during normal construction operations, but is not associated with permanent erosion control features on the project. In no case shall the exposure of erodible earth be for more than five days without erosion control features being implemented.

Temporary erosion control features may be authorized for use in controlling erosion in areas where stage construction or other conditions not under the control of the Contractor preclude completion of a section of work in a continuous manner and in areas where construction operations which must be performed subsequently will cause damage to permanent erosion control features constructed.

When the item of Topsoil or Muck Blanket is included in the contract, the rate of construction of these items may be limited by the availability of topsoil or muck from the normal grading operations. The existence of this condition will be considered as precluding completion of a section or roadway in a continuous manner, and use of temporary erosion control features will be used in areas so affected.

The Contractor shall schedule his operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operations, and the duration of exposed, uncompleted construction to the elements shall be as short as practicable.

Clearing and grubbing shall be so scheduled and performed that grading operations can follow immediately thereafter, and grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.

1.8 TEMPORARY EROSION CONTROL (VEGETATION AND COVERINGS)

General: Temporary vegetative erosion control features shall be installed in accordance with Section 13. Temporary coverings shall be installed in accordance with the manufacturer's recommendations.

1.9 TEMPORARY EROSION CONTROL (SILT FENCES)

Temporary Silt Fence: Temporary silt fence shall be erected at locations as shown on the plans or as approved by the Contracting officer. The filter fabric shall be reinforced with wire fence, when called for, and the post spacings shall not exceed ten feet. The wire reinforcement shall be installed so that the filter fabric is on the upstream side of the fence, and both the wire fence and the filter fabric are on the upstream side of the posts. Posts shall be uniformly installed with approximately 20 degrees inclination toward the potential silt load (upstream) area. The silt fence shall be maintained in an effective condition at all times while in use.

Filter fabric shall be a minimum of 45 inches wide and shall be secured to the post or fence by suitable staples, tie wire, or hog rings in such a manner as to prevent tearing of the fabric. The bottom of the filter fabric shall be entrenched into the ground a minimum of eight inches to prevent water from flowing under

SECTION 015719 - EROSION CONTROL AND ENVIRONMENTAL PROTECTION (continued)

the fence. Filter fabric shall be spliced together only at support posts with a minimum of six-inch overlap and securely sealed.

Staked Turbidity Barrier: Staked turbidity barrier shall be securely fastened to wood or steel supports which are spaced at maximum intervals of six feet and driven a minimum of 12 inches into the ground. A minimum of three supports shall be used. The bottom of the fabric shall be entrenched into the existing ground a minimum of eight inches. The staked turbidity barrier shall be a minimum of 15 inches in height and shall not exceed 18 inches in height.

The support line sewn in the top hem of the filter fabric shall be used at each post location to secure the fabric to the post at an appropriate height.

Staked turbidity barriers shall be installed across ditch lines and at temporary locations as shown on the plans or approved by the Contracting officer where continuous construction activities change the natural contour and drainage runoff.

Posts in staked turbidity barriers shall be installed in the vertical position unless otherwise directed by the Contracting officer.

Floating Turbidity Barrier: This work shall consist of the installation and removal of floating turbidity barriers to contain silt and other deleterious materials that may occur as the result of dredging, filling, or other construction activities in waters of the State. The type barrier used will be installed in accordance with the details contained in the plans, or, when details are not shown, in accordance with the FDOT Standard Index No. 103, or as approved by the Contracting officer. Alternate methods may be approved provided that compliance with applicable permit conditions and State water quality standards are maintained.

1.10 INSPECTION AND MAINTENANCE

General: The Contractor shall, at his expense, provide routine maintenance of permanent and temporary erosion control features until the project is completed and accepted. The Contractor shall inspect all temporary erosion control measures immediately after each rainfall and at least daily during prolonged rainfall. Any deficiencies shall be immediately corrected by the Contractor.

Silt Fences and Turbidity Barriers: The Contractor shall make a daily review of the location of silt fences and turbidity barriers to ensure that the silt fence or turbidity barriers are properly located for effectiveness and contain no breaches. Where deficiencies exist, additional silt fences or turbidity barriers shall be installed as directed.

Sediment deposits shall be removed when the deposit reaches approximately one-half of the volume capacity of the temporary silt fence or turbidity barrier as directed. Any sediment deposits remaining in place after the temporary silt fence or turbidity barrier is no longer required shall be dressed to conform with the finished grade, prepared and finished as shown on the construction plans, or seeded in accordance with Section 13.

END OF SECTION 015719

SECTION 015719 - EROSION CONTROL AND ENVIRONMENTAL PROTECTION (continued)

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for the following:
 - 1. Salvaging nonhazardous demolition and construction waste.
 - 2. Recycling nonhazardous demolition and construction waste.
 - 3. Disposing of nonhazardous demolition and construction waste.
- B. Related Sections:
 - 1. Division 01 Section "Multiple Contract Summary" for coordination of responsibilities for waste management.
 - 2. Division 02 Section "Structure Demolition" for disposition of waste resulting from demolition of buildings, structures, and site improvements, and for disposition of hazardous waste].
 - 3. Division 02 Section "Selective Structure Demolition" for disposition of waste resulting from partial demolition of buildings, structures, and site improvements, and for disposition of hazardous waste.
 - 4. Division 04 Section "Unit Masonry" for disposal requirements for masonry waste.
 - 5. Division 04 Section "Stone Masonry" for disposal requirements for excess stone and stone waste.
 - 6. Division 31 Section "Site Clearing" for disposition of waste resulting from site clearing and removal of above- and below-grade improvements.

1.3 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL (continued):

- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into the Work.

1.4 PERFORMANCE REQUIREMENTS

- A. General: Achieve end-of-Project rates for salvage/recycling of 75 percent by weight of total non-hazardous solid waste generated by the Work. Practice efficient waste management in the use of materials in the course of the Work. Use all reasonable means to divert construction and demolition waste from landfills and incinerators. Facilitate recycling and salvage of materials:

1. Demolition Waste:

- a. Asphaltic concrete paving.
- b. Concrete.
- c. Concrete reinforcing steel.
- d. Brick.
- e. Concrete masonry units.
- f. Wood studs.
- g. Wood joists.
- h. Plywood and oriented strand board.
- i. Wood paneling.
- j. Wood trim.
- k. Structural and miscellaneous steel.
- l. Rough hardware.
- m. Roofing.
- n. Insulation.
- o. Doors and frames.
- p. Door hardware.
- q. Windows.
- r. Glazing.
- s. Metal studs.
- t. Gypsum board.
- u. Acoustical tile and panels.
- v. Carpet.
- w. Carpet pad.
- x. Demountable partitions.
- y. Equipment.
- z. Cabinets.
- aa. Plumbing fixtures.
- bb. Piping.
- cc. Supports and hangers.
- dd. Valves.
- ee. Mechanical equipment.
- ff. Refrigerants.
- gg. Electrical conduit.
- hh. Copper wiring.
- ii. Lighting fixtures.
- jj. Lamps.
- kk. Ballasts.
- ll. Electrical devices.
- mm. Switchgear and panelboards.

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL (continued):

nn. Transformers.

2. Construction Waste:

- a. Site-clearing waste.
- b. Masonry and CMU.
- c. Lumber.
- d. Wood sheet materials.
- e. Wood trim.
- f. Metals.
- g. Roofing.
- h. Insulation.
- i. Carpet and pad.
- j. Gypsum board.
- k. Piping.
- l. Electrical conduit.
- m. Packaging: Regardless of salvage/recycle goal indicated in paragraph above, salvage or recycle 100 percent of the following uncontaminated packaging materials:
 - 1) Paper.
 - 2) Cardboard.
 - 3) Boxes.
 - 4) Plastic sheet and film.
 - 5) Polystyrene packaging.
 - 6) Wood crates.
 - 7) Plastic pails.

1.5 ACTION SUBMITTALS

- A. Waste Management Plan: Submit plan within 30 days of Notice to Proceed.

1.6 INFORMATIONAL SUBMITTALS

- A. Waste Reduction Progress Reports: Concurrent with each Application for Payment, submit report. Use Waste Reduction Progress Reports. Include the following information:
 - 1. Material category.
 - 2. Generation point of waste.
 - 3. Total quantity of waste in tons.
 - 4. Quantity of waste salvaged, in actual in tons.
 - 5. Quantity of waste recycled, in actual in tons.
 - 6. Total quantity of waste recovered (salvaged plus recycled) in tons.
 - 7. Total quantity of waste recovered (salvaged plus recycled) as a percentage of total waste.
- B. Waste Reduction Calculations: Before request for Substantial Completion, submit calculated end-of-Project rates for salvage, recycling, and disposal as a percentage of total waste generated by the Work.
- C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations. Indicate whether organization is tax exempt.

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL (continued):

- D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations. Indicate whether organization is tax exempt.
- E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them. Include manifests, weight tickets, receipts, and invoices.
- G. LEED Submittal: LEED letter template for Credit MR 2.1 and 2.2, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.
- H. Qualification Data: For refrigerant recovery technician.
- I. Statement of Refrigerant Recovery: Signed by refrigerant recovery technician responsible for recovering refrigerant, stating that all refrigerant that was present was recovered and that recovery was performed according to EPA regulations. Include name and address of technician and date refrigerant was recovered.

1.7 QUALITY ASSURANCE

- A. Refrigerant Recovery Technician Qualifications: Certified by EPA-approved certification program.
- B. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:
 - 1. Review and discuss waste management plan including responsibilities of waste management coordinator.
 - 2. Review requirements for documenting quantities of each type of waste and its disposition.
 - 3. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
 - 4. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
 - 5. Review waste management requirements for each trade.

1.8 WASTE MANAGEMENT PLAN

- A. General: Develop a waste management plan according to LEED CI MR2.1 and MR2.2. Plan shall consist of waste identification, waste reduction work plan, and cost/revenue analysis. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
- B. Waste Identification: Use Waste Identification Form. Include estimated quantities and assumptions for estimates.

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL (continued):

- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Use Waste Reduction Work Plan Form. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into the Work.
 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
 3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.
 5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.
 6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on Project site where materials separation will be located.
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan. Use Cost / Revenue Analysis Form. Include the following:
1. Total quantity of waste.
 2. Estimated cost of disposal (cost per unit). Include hauling and tipping fees and cost of collection containers for each type of waste.
 3. Total cost of disposal (with no waste management).
 4. Revenue from salvaged materials.
 5. Revenue from recycled materials.
 6. Savings in hauling and tipping fees by donating materials.
 7. Savings in hauling and tipping fees that are avoided.
 8. Handling and transportation costs. Include cost of collection containers for each type of waste.
 9. Net additional cost or net savings from waste management plan.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PLAN IMPLEMENTATION

- A. General: Implement approved waste management plan. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.
1. Comply with Division 01 Section "Temporary Facilities and Controls" for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Engage a waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL (continued):

- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for the Work occurring at Project site.
 - 1. Distribute waste management plan to everyone concerned.
 - 2. Distribute waste management plan to entities when they first begin work on-site. Review plan procedures and locations established for salvage, recycling, and disposal.

3.2 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Sale and Donation: Permitted on Project site.
- B. Salvaged Items for Owner's Use: Salvage items for Owner's use and handle as follows:
 - 1. Clean salvaged items.
 - 2. Pack or crate items after cleaning. Identify contents of containers.
 - 3. Store items in a secure area until delivery to Owner.
 - 4. Transport items to Owner's storage area designated by Owner.
 - 5. Protect items from damage during transport and storage.
- C. Doors and Hardware: Brace open end of door frames. Except for removing door closers, leave door hardware attached to doors.
- D. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.
- E. Lighting Fixtures: Separate lamps by type and protect from breakage.
- F. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

- A. General: Recycle paper and beverage containers used by on-site workers.
- B. Recycling Receivers and Processors: List below is provided for information only; available recycling receivers and processors include, but are not limited to, the following:
 - 1. Marpan Recycling, 6020 Woodville Highway, Tallahassee, FL, (850) 216-1006.
 - 2. Veolia Environmental Services, 342 Marpan Lane, Tallahassee, FL, (850) 877-8299.
 - 3. Habitat for Humanity, 2921 Roberts Avenue, Tallahassee, FL, (850) 574-2288.
- C. Recycling Incentives: Revenues, savings, rebates, tax credits, and other incentives received for recycling waste materials shall accrue to Contractor and credited to the Owner.

3.4 RECYCLING CONSTRUCTION WASTE

- A. Packaging:

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL (continued):

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
 2. Polystyrene Packaging: Separate and bag materials.
 3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
 4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- B. Site-Clearing Wastes: Chip brush, branches, and trees at landfill facility.

3.5 DISPOSAL OF WASTE

- A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn waste materials.
- C. Disposal: Transport waste materials off Owner's property and legally dispose of them.

END OF SECTION 017490

SECTION 017490 - CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL (continued):

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 017700 – CLOSEOUT PROCEDURES

PART 1 - GENERAL

- 1.01 **SUBSTANTIAL COMPLETION:** (See Section 00700 - General Conditions, Section 9.8). Before requesting inspection for certification of Substantial Completion, complete the following:
- A. Change-over permanent locks and transmit keys to the Owner.
 - B. Complete start-up testing of systems, and instruction of the Owner's personnel. Remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
 - C. Complete final clean up. Touch-up and repair and restore marred exposed finishes.
 - D. Submit record drawings (As-builts), maintenance manuals, damage or settlement survey, and similar record information.
 - E. Attain Occupancy permits.
- 1.02 **INSPECTION PROCEDURES:** When the Contractor considers the work substantially complete, he shall prepare and submit a comprehensive list of items to be completed and/or corrected to the Architect. The Contractor shall proceed to promptly complete and/or correct all items on the list.
- A. Upon receipt of Contractor's list and assurance by the Contractor that the list has been addressed/ completed, the Architect will make an inspection for final verification that the list provided is comprehensive and includes all remaining work items to be completed or corrections required OR inform the Contractor of work to be completed before an inspection will be conducted.
 - B. After receipt of the completion/punch list and prior to the architect issuing substantial completion, the architect shall require that every consultant who provided documents for the project (ie: electrical, HVAC, Plumbing, Architectural, Roof, telecomm, etc.) shall perform an onsite inspection of work completed under the scope of their responsibilities and provide a detailed final completion list of incomplete work or work requiring corrections.
 - C. This process will be the responsibility of the Architect to ensure this occurs and that the information gathered from those site visits is to be coordinated through the contractor, added to the contractor's final completion/punch list, and issued to the owner. This will ensure that all required corrections are included in the final punch list prior to substantial completion being awarded.
 - D. When the work is substantially complete, the Architect will prepare the Certificate of Substantial Completion which shall establish the date of Substantial Completion.
 - E. Results of the completed inspection will form the basis of requirements for final acceptance, **including any items discovered at a later date considered necessary to be completed for final.**
- 1.03 **FINAL ACCEPTANCE:** (See Section 00700 - General Conditions Section 9.10). Before requesting inspection for certification of final acceptance and final payment, complete the following:
- A. Submit a copy of the final inspection list stating that each item has been completed or otherwise resolved for acceptance.

SECTION 017700 – CLOSEOUT PROCEDURES (continued):

- B. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 - C. Refer to Section 01027 - Application for Payment - Final Payment Application.
 - D. Provide the Architect with 'Final Statement of Compliance', for the Owner.
- 1.04 **REINSPECTION PROCEDURE** (if required): The Architect will reinspect the Work upon receipt of notice that the Work has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.
- A. Prior to Final completion, A Final walk through/verification of completion/correction by the various design consultants shall occur. Final payment to the contractor shall not be released until the final completion /punch list is complete 100%.
 - B. Upon completion of reinspection, the Architect will then prepare a certificate of final acceptance or advise the Contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance. If necessary, reinspection will be repeated.
- 1.05 **RECORD DRAWINGS**: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark-up these drawings to show the actual installation where installation varies from that shown originally. Mark whichever drawing is most capable of showing conditions accurately. Give particular attention to concealed elements that would be difficult to measure and record at a later date. Maintain and review monthly with the Owner and Architect.
- A. Organize record drawing sheets into manageable sets, bind with durable paper cover sheets, and print suitable titles, dates and other identification on the cover.
 - B. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and lost. Provide access to Project Record Documents for Architect's reference during normal working hours.
 - C. Upon completion of the Work, submit Record Drawings (red-line field as-builts) to the Architect for Owner's records.
 - D. As built documents are a requirement of final close out for the project. As built documents shall include all design revisions issued during the course of the project. Those revisions shall be marked on the documents in a way that provides clarity for the noted changes. It is at the sole discretion of the architect to determine what is and what is not adequate for as built documentation.
 - E. The contractor is expected to maintain as built documents throughout the course of the project work. Monthly review of the as built documents wherein the contractor shall show the architect what changes were accepted and have been noted as revisions to the project ON the as built documents each month.
 - F. Failure to maintain as built documentation during the course of the project may be grounds to hold progress payment.
 - G. Failure to provide adequate as built documentation shall be grounds to hold final payment pending receipt of acceptable as built documentation.
- 1.06 **PROJECT RECORD SPECIFICATIONS**: Maintain one copy of the Project Manual, including addenda. Mark-up to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot be readily discerned later by direct observation. Note related record drawing information and Product Data.
- A. Maintain on site, in a 3-ring binder or other organized method, executed RFI's, ASI's, RFP's, CO's and other project record items.
 - B. All record of revisions is to be incorporated into the Project As-Built drawings

SECTION 017700 – CLOSEOUT PROCEDURES (continued):

C. Upon completion of the Work, submit record Drawings and Specifications to the Architect for the Owner's records.

1.07 **PROJECT AS-BUILT DRAWINGS:** The Contractor shall, at his own expense, hire the Architect of Record to prepare as-built drawings. The Contractor shall provide to the Architect record drawings and record specifications. The Contractor is solely responsible for the content of the record drawings and the as-built documents.

A. Site As-built drawings shall comply with the following:

1. Show the actual locations of all components, including depth below grade, along with any changes and/or modifications to the Contract Drawings. Provide GPS coordinates for all below grade installations.
 - a. During the course of the project, various utilities are buried on site. The project as-built documentation for utilities shall include a layout for as-built conditions of all buried underground utility runs to within 3 feet of actual.
 - b. All above ground access points shall be detailed on site as built to within 1 foot of actual with GPS coordinates provided for each item.
 - c. Items to be recorded include but are not limited to water Valves, sewer manholes, storm water manholes, and sewer and storm water cleanouts, electronic junction boxes buried on site, electrical junction boxes buried on site, site transformers, and any other items as indicated on the project design documents.
 - d. All stub outs for utility tie ins shall be indicated on the as built plan.
 - e. All utilities shall be labeled every 50 feet on the as built so as to allow easy identification in the field while using electronic as built plans. All utility items listed in item 3 above shall also be labeled on the as built plans.
 - f. All dimensions and elevations, including invert elevations, shall be verified by field measurements.
2. The Contractor is cautioned to make all necessary measurements and elevations during installation to accurately locate all concealed items.

B. **As-Built Survey:** Contractor shall provide signed and sealed As-Built Survey of existing grades and structures as required by authorities having jurisdictions.

1.08 **MAINTENANCE MANUALS:** Organize maintenance data into sets of manageable size. Bind in individual heavy-duty 2-inch, 3-ring vinyl-covered binders, with pocket folders for folded sheet information. Mark identification on front and spine of each binder. Include the following information:

- | | |
|-----------------------------------|---------------------------|
| Emergency instructions. | Spare parts list. |
| Copies of warranties. | Wiring diagrams. |
| Recommended "turn around" cycles. | Inspection procedures. |
| Shop Drawings and Product Data. | Fixture lamping schedule. |

SECTION 017700 – CLOSEOUT PROCEDURES (continued):

1.09 **OPERATING AND MAINTENANCE INSTRUCTIONS:** Arrange for the installer of equipment that requires regular maintenance to meet with the Owner's personnel to provide instruction in proper operation and maintenance. Acceptance of the owner training provided is at the sole discretion of the owner. Training provided must be comprehensive in nature and include all pertinent aspects of use and maintenance for the item(s) requiring training. Include a detailed review of the following:

- | | |
|-----------------------|--|
| Maintenance manuals. | Spare parts and materials. |
| Tools. | Lubricants. |
| Control sequences. | Hazards. |
| Warranties and bonds. | Maintenance agreements and similar continuing commitments. |

As part of instruction for operating equipment, demonstrate the following procedures:

- | | |
|----------------------------------|-----------------------|
| Start-up and shutdown. | Emergency operations. |
| Noise and vibration adjustments. | Safety procedures. |

All operation and training sessions shall be recorded and provided to the Owner. The contractor may use their own personnel to film the training provided. Verify with Owner the appropriate format of recording that should be used.

1.10 **FINAL CLEANING:** Employ experienced workers for final cleaning. Clean each surface to the condition expected in a commercial building cleaning and maintenance program. Complete the following, as a minimum before requesting inspection for certification of Substantial Completion:

- A. Remove labels that are not permanent labels.
- B. Clean transparent materials. Remove glazing compound. Replace chipped or broken glass.
- C. Clean exposed hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean.
- D. Vacuum carpeted surfaces.
- E. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
- F. Clean the site of rubbish, litter and other foreign substances. Sweep paved areas; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth even-textured surface.

1.11 **REMOVAL OF PROTECTION:** Remove temporary protection and facilities.

1.12 **CLOSE OUT DOCUMENTATION:**

- A. All close out documents shall be provided in hard copy and identical electronic copy.
- B. Contractor shall provide (2) hard copies for all documents and as built plans.
- C. Contractor shall provide (4) electronic copies identical to hard copies as listed above.
 - a. Contractor shall utilize “thumb drive” media of sufficient size to accommodate entire close out package including all as built documents being saved onto (1) thumb drive encompassing (1) full copy of all documentation on that (1) drive.

SECTION 017700 – CLOSEOUT PROCEDURES (continued):

- b. Each successive copy of electronic documents shall be identical and complete.
 - c. Folder structure on the Thumb drive shall be as follows:
 - i. 0 NAME OF PROJECT
 - ii. 1 SCOPE OF WORK
 - iii. 2 AS BUILT DRAWINGS
 - iv. 3 O&M MANUALS
 - v. 4 SUB WARRANTIES
 - vi. 5 CERTIFICATES & PERMITS
 - vii. 6 TEST REPORTS
 - viii. 7 SHOP DRAWINGS
 - ix. 8 DPO VENDOR LETTERS
 - x. 9 AIA WAIVERS G706 & G707
 - xi. 10 ATTIC STOCK
 - d. Subfolder structure on the Thumb drive under items 2, 3, 4 & 7 above shall be as follows:
 - i. ARCHITECTURAL
 - ii. AUDIO VISUAL
 - iii. CIVIL
 - iv. FIRE PROTECTION
 - v. FURNISHINGS & EQUIPMENT
 - vi. KITCHEN
 - vii. LANDSCAPE
 - viii. MECHANICAL
 - ix. PLUMBING
 - x. STRUCTURAL
 - xi. TELECOMM
 - e. Under the ‘Scope of Work’ folder, provide the Title sheet showing Project Information and all Architect & Engineer names and contact information. Provide a separate brief Narrative of the Project Scope, type of Structure, HVAC and other broad project information utilized. In this narrative, if this is a Renovation, provide a list of rooms that were altered during the construction process.
- D. In addition to close out documentation, all spare parts or extra parts required by specification shall be provided at final close out. The method for this to occur is negotiable but final verification including transmittal and owner/architect verification of receipt is a close out requirement.
- E. Contractor MAY NOT deliver close out documents in multiple phases or at multiple times or to multiple parties.
- a. Initial submittal of Close out documents shall be to the Architect for review and comment.
 - b. Upon Architect acceptance, the Contractor shall gather all hard copies and electronic copies for a full and complete documentation deliverable for the project close out documentation.
 - c. In addition to items listed in various parts of the specifications, THE CONTRACTOR SHALL ALSO PROVIDE A COMPREHENSIVE SPREADSHEET THAT LISTS THE NAME AND CONTACT PERSON WITH PHONE NUMBER AND EMAIL FOR EACH SUBCONTRACTOR THAT PERFORMED WORK ON THE PROJECT. (see ‘Subcontractor Contact List’ attachment).
 - d. A Warranty spreadsheet shall also be included showing the term of any warranty provided by the subcontractor, the date the warranty started, and the end date the warranty will be completed on. (see ‘Warranty Contact List’ attachment).
 - e. The Warranty spreadsheet shall also list any manufacturers extended warranties that may exist for any item under a particular subcontractor’s scope. Include the same information listed in item d. above for manufacturer’s warranties.

SECTION 017700 – CLOSEOUT PROCEDURES (continued):

- F. Once the previous item 'E' is finalized and all Work is completed, including ALL punch out, all paperwork, all pay applications submitted with final and retainage applied for and any unspent funds returned, such that the job is closed out and 100% completed with no lingering issues yet to be resolved, then the Contractor shall gather a complete project close out deliverable including both hard copies and electronic copies, warranties, extra parts and any other close out required items, they are to notify the architect that they are ready to schedule the PROJECT CLOSE OUT MEETING.
- a. The closeout meeting will be held at Maintenance on 933 Baldwin Road, Lynn Haven, Florida. The Contractor is required to schedule the meeting in advance and a formal meeting request sent via email and accepted by all required attendees before the meeting is held.
 - b. A list of the attendees with signatures and contact numbers shall be created and all attendees shall be noted and shall sign in.
 - c. The project close out meeting shall consist of a meeting with all stakeholders including but not limited to the following:
 - i. BDS Facilities PM
 - ii. BDS Maintenance Supervisor
 - iii. BDS Administration for the Project facility
 - iv. Architect, other design consultants as directed by the architect
 - v. Contractor project management team and project executive
 - d. The project close out meeting agenda shall include a recap of the project scope, presentation of a completed and architect approved final punch list.
 - e. Contractor shall deliver close out documents with Transmittals to Facilities & Maintenance.
 - i. Each of the transmittals shall be signed by the Architect and the Contractor signifying they have reviewed and approved the close out documents and all close out requirements have been met before the documents are turned over to BDS.
 - ii. The maintenance transmittal shall be signed by the head of maintenance signifying the close out documents have been completed and have been received by Maintenance.
 - iii. The Facilities transmittal will be signed by the Facilities project manager signifying the close out documents have been completed and have been received by Facilities.
 - iv. A copy of each transmittal will be provided to the head of maintenance, the contractor, the architect, and the original will be retained by the Facilities PM.
 - v. The original transmittals will be held in perpetuity at the facilities offices as record of the formal close out being completed.
 - f. Question and answers will be called for all participants. Any necessary follow up meetings for any lingering items associated with the project will be scheduled and coordination responsibility for each item will be assigned.
 - g. Contractor will provide meeting minutes for the meeting including action items list and schedule for completion of any action items noted during the project close out meeting
 - h. Please note in some instances final financial paperwork may be incomplete or the contract may remain open, but only with the approval of the Bay District Facilities' PM.

- 1.13 **COMPLIANCE:** Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Remove waste materials from the site and dispose of in a lawful manner.

END OF SECTION 017700

**BAY DISTRICT SCHOOLS
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SECTION 017800 - WARRANTIES AND BONDS

PART 1 - GENERAL

- 1.01 **STANDARD PRODUCT WARRANTIES** are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
Note: All Standard Product Warranties are to be provided.
- 1.02 **SPECIAL WARRANTIES** are written warranties required by or incorporated in Contract Documents, to extend time limits provided by standard warranties or to provide greater rights for the Owner. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
- A. Requirements for warranties for products and installations that are specified to be warranted, are included in the individual Sections of Divisions-2 through -33.
- 1.03 **DISCLAIMERS AND LIMITATIONS:** Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and Subcontractors required to countersign special warranties with the Contractor.
- 1.04 **RELATED DAMAGES AND LOSSES:** When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.
- 1.05 **REINSTATEMENT OF WARRANTY:** When Work covered by a warranty has failed and been corrected, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- 1.06 **REPLACEMENT COST:** On determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through part of its useful service life.
- 1.07 **OWNER'S RECOURSE:** Written warranties made to the Owner are in addition to implied warranties, and shall not limit duties, obligations, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligations, rights, or remedies.
- A. **Rejection of Warranties:** The Owner reserves the right to reject warranties and limit selections to products with warranties not in conflict with requirements of the Contract Documents. The Owner reserves the right to refuse to accept Work where a special warranty, or similar commitment is required, until evidence is presented that entities required to countersign commitments are willing to do so.
- 1.08 **SUBMIT WRITTEN WARRANTIES** to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion, submit written warranties on the Architect's request.
- A. When a designated portion of the Work is completed and occupied or used, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within fifteen days of completion of that designated portion of the Work.

SECTION 017800 - WARRANTIES AND BONDS (continued):

- B. When a special warranty is to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner through the Architect for approval prior to final execution.
- C. Refer to individual Sections of Divisions-2 through -33 for specific content, and particular requirements for submittal of special warranties.
- D. Bind warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2" by 11" paper.
- E. Provide heavy paper dividers with celluloid covered tabs for each warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
- F. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the Project title or name, and the name of the Contractor.
- G. When operating and maintenance manuals are required for warranted construction, provide additional copies of each warranty, as necessary, for inclusion in each required manual.

END OF SECTION 017800

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SECTION 03 20 00 – CONCRETE REINFORCING

PART 1 - GENERAL

1.1 SUMMARY

- A. This section describes concrete reinforcement.

1.2 RELATED WORK

- A. Section 03 30 00, Cast-In-Place Concrete

1.3 REFERENCES

- A. ACI: American Concrete Institute:
 - 1. ACI SP-66: ACI Detailing Manual.
 - 2. ACI 318: Building Code Requirements for Structural Concrete and Commentary.
- B. ASTM: American Society for Testing and Materials:
 - 1. ASTM A82: Standard Specification for Steel Wire, Plain, for Concrete Reinforcement.
 - 2. ASTM A185: Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete.
 - 3. ASTM A615: Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.

1.4 SUBMITTAL OF SHOP DRAWINGS

- A. Submit complete bar schedule, bar details, and erection drawings in accordance with ACI SP-66.
- B. Show each type of bar marked with identification corresponding to identification tag on bar.
- C. Erection drawings shall show size and location of all openings.

1.5 REINFORCEMENT STEEL STORAGE

- A. Store reinforcing steel blocked up off the ground and in orderly stacks.
- B. Each stack shall only contain bars with the same identifying label.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Reinforcement Bars:
 - 1. No. 4, or larger, bars shall conform to ASTM A615, Grade 60.
 - 2. No. 3 bars shall conform to ASTM A615, Grade 40.
- B. Welded Wire Fabric: Conform to ASTM A185 using bright basic wire meeting ASTM A82.
- C. Bolster, Chairs, and Accessories:
 - 1. Conform to ACI SP-66.
 - 2. Provide all spacers, bolsters, chairs, ties, and other devices necessary to properly space, place, support, and fasten reinforcement in place.
 - 3. Metal accessories shall be galvanized or plastic-protected where legs will be exposed in finished concrete surfaces.
 - 4. Do not use rocks, broken bricks, wood blocks, or concrete fragments for reinforcing support.
- D. Testing: Perform at the mill for each heat. Submit certified test results, if required.

2.2 FABRICATION OF BARS

- A. Fabricate with cold bends conforming to the recommended dimensions shown in ACI 318, Chapter 7.
- B. Field fabrication will be allowed only if the Contractor has equipment to properly fabricate steel.
- C. Attach metal tags for identification.

PART 3 - EXECUTION

3.1 PLACING METAL REINFORCEMENT

- A. Refer to Structural Drawings for more information.
- B. Place in accordance with ACI 318, Chapters 7 and 12.
- C. Tie securely with 16-gauge or larger annealed iron wire.
- D. Place steel with concrete cover in accordance with ACI 318, Chapter 7, Paragraph 7.7, unless otherwise indicated.
- E. Splice steel not less than 30-bar diameter for ASTM A615, Grade 40, and 43-bar diameter for ASTM A615, Grade 60, unless otherwise indicated. For plain bars, splice not less than twice that for deformed bars.
- F. Lap welded wire fabric not less than the length of one mesh.

END OF SECTION 03 20 00

**BAY DISTRICT SCHOOLS
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SECTION 03 31 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mixture design, placement procedures, and finishes, for the following:
 - a. Footings.
 - b. Foundation walls.
 - c. Slabs-on-grade.
 - d. Building frame members.
- B. Related Sections include the following:
 - a. Division 2 Section “Cement Concrete Pavement” for concrete pavement and walks.

1.3 DEFINITIONS

- A. Cementitious Materials: Portland cement ASTM C150 Type I/II, **No fly ash is permitted on the project.**

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Design Mixtures: For each concrete mixture. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.
 - a. Indicate amounts of mixing water to be withheld for later addition at Project site.
- C. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, hoop spacing, and supports for concrete reinforcement.
- D. Material Test Reports: For the following, from a qualified testing agency, indicating compliance with requirements:
 - a. Aggregates.
- E. Material Certificates: For each of the following, signed by manufacturers:

- a. Cementitious materials.
 - b. Admixtures.
 - c. Steel reinforcement and accessories.
 - d. Waterstops.
 - e. Curing compounds.
 - f. Bonding agents.
 - g. Adhesives.
 - h. Vapor retarders.
 - i. Semirigid joint filler.
 - j. Joint-filler strips.
- F. Field quality-control test and inspection reports.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed concrete Work similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
- C. Testing Agency Qualifications: An independent agency, qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548.
- D. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from one source, and obtain admixtures through one source from a single manufacturer.
- E. ACI Publications: Comply with the following unless modified by requirements in the Contract Documents:
 - a. ACI 301, "Specification for Structural Concrete," Sections 1 through 5.
 - b. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
- G. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.
- B. Waterstops: Store waterstops under cover to protect from moisture, sunlight, dirt, oil, and other contaminants.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:
 - a. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products specified.

- b. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, manufacturers specified.

2.2 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
 - a. Plywood, metal, or other approved panel materials.
 - b. Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
 - i. B-B (Concrete Form), Class 1 or better; mill oiled and edge sealed.
- B. Rough-Formed Finished Concrete: Plywood, lumber, metal, or another approved material. Provide lumber dressed on at least two edges and one side for tight fit.
- C. Forms for Cylindrical Columns, Pedestals, and Supports: Metal, glass-fiber-reinforced plastic, paper, or fiber tubes that will produce surfaces with gradual or abrupt irregularities not exceeding specified formwork surface class. Provide units with sufficient wall thickness to resist plastic concrete loads without detrimental deformation.
- D. Chamfer Strips: Wood, metal, PVC, or rubber strips, $\frac{3}{4}$ by $\frac{3}{4}$ inch (19 by 19 mm), minimum.
- E. Form-Release Agent: Commercially formulated form-release agent that will not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
 - a. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- F. Form Ties: Factory-fabricated, removable or snap-off metal or glass-fiber-reinforced plastic form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete on removal.
 - a. Furnish units that will leave no corrodible metal closer than 1 inch (25 mm) to the plane of exposed concrete surface.
 - b. Furnish ties that, when removed, will leave holes no larger than 1 inch (25 mm) in diameter in concrete surface.
 - c. Furnish ties with integral water-barrier plates to walls indicated to receive damp proofing or waterproofing.

2.3 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615/A 615M, A616 Grade 60 (Grade 420), deformed.
- B. Plain-Steel Welded Wire Reinforcement: ASTM A 185, plain, fabricated from as drawn steel wire into flat sheets.

2.4 REINFORCEMENT ACCESSORIES

- A. Joint Dowel Bars: ASTM A 615/A 615M, A616 Grade 60 (Grade 420), plain-steel bars, cut bars true to length with ends square and free of burrs.
- B. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

- a. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless steel bar supports.

2.5 CONCRETE MATERIALS

- A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:
 - a. Portland Cement: ASTM C 150, Type I/II.
- B. Normal-Weight Aggregates: ASTM C 33, Class 3M coarse aggregate or better, graded.
 - a. Maximum Coarse-Aggregate Size:
 - i. 3/4" maximum unless noted.
- C. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- D. Water: ASTM C 94/C 94M and potable.

2.6 ADMIXTURES

- A. Air-Entraining Admixture: ASTM C 260.
- B. Chemical Admixtures: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
 - a. Water-Reducing Admixture: ASTM C 494/C 494M, Type A.
 - b. Water-Reducing and Retarding Admixture: ASTM C 494/C 494M, Type D.
 - c. High-Range, Water-Reducing Admixture: ASTM C 494/C 494M, Type F.

2.7 WATERSTOPS

- A. Flexible Rubber Waterstops: CE CRD-C 513, for embedding in concrete to prevent passage of fluids through joints. Factory fabricate corners, intersections, and directional changes.
- B. Self-Expanding Butyl Strip Waterstops: Manufactured rectangular or trapezoidal strip, butyl rubber with sodium bentonite or other hydrophilic polymers, for adhesive bonding to concrete, 3/4 by 1 inch (19 by 25 mm).

2.8 VAPOR RETARDERS

- A. Plastic Vapor Retarder: ASTM E 1745, Class C, or polyethylene sheet, ASTM D 4397, not less than 6 mils thick. Include manufacturer's recommended adhesive or pressure-sensitive joint tape.

2.9 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
- B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1,
 - B. Class B, dissipating.
- F. Clear, Waterborne, Membrane-Forming Curing and Sealing Compound:

- a. ASTM C 1315, Type 1, Class A.

2.10 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D 1751, asphalt-saturated cellulosic fiber.
- B. Semi rigid Joint Filler: Two-component, semi rigid, 100 percent solids, per ASTM D 2240.
- C. Bonding Agent: ASTM C 1059, Type II, non-redispersible, acrylic emulsion or styrene butadiene.
- D. Epoxy Bonding Adhesive: ASTM C 881, two-component epoxy resin, capable of humid curing and bonding to damp surfaces, of class suitable for application temperature and of grade to suit requirements.
- E. Dovetail Anchor Slots: Hot-dip galvanized steel sheet, not less than 0.0336 inch (0.85 mm) thick, with bent tab anchors. Temporarily fill or cover face opening of slots to prevent intrusion of concrete or debris.

2.11 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.
 - a. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement.
- C. Admixtures: Use admixtures according to manufacturer's written instructions.
 - a. Use high-range water-reducing or plasticizing admixture in concrete, as required, for placement and workability and as specified on drawings and schedules.
 - b. Use water-reducing and retarding admixture when required by high temperatures, low humidity, or other adverse placement conditions.
 - c. Use water-reducing admixture in pumped concrete, concrete for heavy-use industrial slabs and parking structure slabs, concrete required to be watertight, and concrete with a water-cementitious materials ratio below 0.50.

2.12 CONCRETE MIXTURES FOR BUILDING ELEMENTS

- A. Proportion normal-weight concrete mixture as follows:
 - a. Minimum Compressive Strength:
 - i. Wall Footings 3000 psi at 28 days.
 - ii. Slab on Grade 4500 psi at 28 days.
 - b. Maximum Water-Cementitious Materials Ratio: 0.51.
 - c. Slump Limit: 3" to 6"
 - d. Air Content: 4 percent, plus or minus 1.5 percent at point of delivery for $\frac{3}{4}$ inch nominal maximum aggregate size.

2.13 FABRICATING REINFORCEMENT

- A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.14 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116, and furnish batch ticket information.

- B. When air temperature is between 85 and 90 deg F (30 and 32 deg C), reduce mixing and delivery time from 1-1/2 hours to 75 minutes; when air temperature is above 90 deg F (32 deg C), reduce mixing and delivery time to 60 minutes.

PART 3 - EXECUTION

3.1 FORMWORK

- A. Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, and construction loads that might be applied, until structure can support such loads.
- B. Construct formwork so concrete members and structures are of size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
 - a. Class A, 1/8 inch (3.2 mm) for smooth-formed finished surfaces.
 - b. Class C, 1/2 inch (13 mm) for rough-formed finished surfaces.
- D. Construct forms tight enough to prevent loss of concrete mortar.
- E. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Provide crush or wrecking plates where stripping may damage cast concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
 - a. Install keyways, reglets, recesses, and the like, for easy removal.
 - b. Do not use rust-stained steel form-facing material.
- F. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- G. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- H. Chamfer exterior corners and edges of permanently exposed concrete.
- I. Form openings, chases, offsets, sinkages, keyways, reglets, blocking, screeds, and bulkheads required in the Work. Determine sizes and locations from trades providing such items.
- J. Clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- K. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- L. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

3.2 EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 - a. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC's "Code of Standard Practice for Steel Buildings and Bridges."

- b. Install dovetail anchor slots in concrete structures as indicated.

3.3 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F (10 deg C) for 24 hours after placing concrete, if concrete is hard enough to not be damaged by form-removal operations and curing and protection operations are maintained.
 - a. Leave formwork for beam soffits, joists, slabs, and other structural elements that supports weight of concrete in place until concrete has achieved at least 70 percent of its 28-day design compressive strength.
 - b. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.
- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material will not be acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Architect.

3.4 SHORES AND RESHORES

- A. Comply with ACI 318 (ACI 318M) and ACI 301 for design, installation, and removal of shoring and reshoring.

3.5 VAPOR RETARDERS

- A. Plastic Vapor Retarders: Place, protect, and repair vapor retarders according to ASTM E 1643 and manufacturer's written instructions.
 - a. Lap joints 6 inches (150 mm) and seal with manufacturer's recommended tape.

3.6 STEEL REINFORCEMENT

- A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.
 - a. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that would reduce bond to concrete.
- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.
 - a. Weld reinforcing bars according to AWS D1.4, where indicated.
- D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.
- E. Install welded wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction.
 - a. Lace overlaps with wire.

3.7 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Architect.
 - a. Place joints perpendicular to main reinforcement. Do not continue reinforcement through sides of strip placements of floors and slabs.
 - b. Form keyed joints as indicated. Embed keys at least 1-1/2 inches (38 mm) into concrete.

- c. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- C. Contraction Joints in Slabs-on-Grade: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of concrete thickness as follows:
 - a. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8 inch (3.2 mm). Repeat grooving of contraction joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.
 - b. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch- (3.2-mm-) wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.
- D. Isolation Joints in Slabs-on-Grade: After removing formwork, install joint-filler strips at slab junctions with vertical surfaces, such as column pedestals, foundation walls, grade beams, and other locations, as indicated.
 - a. Extend joint-filler strips full width and depth of joint, terminating flush with finished concrete surface, unless otherwise indicated.
 - b. Terminate full-width joint-filler strips not less than ½ inch (13 mm) or more than 1 inch (25 mm) below finished concrete surface where joint sealants, specified in Division 7 Section “Joint Sealants,” are indicated.
 - c. Install joint-filler strips in lengths as long as practicable. Where more than one length is required, lace or clip sections together.

3.8 WATERSTOPS

- A. Flexible Waterstops: Install in construction joints and at other joints indicated to form a continuous diaphragm. Install in longest lengths practicable. Support and protect exposed waterstops during progress of the Work. Field fabricate joints in waterstops according to manufacturer’s written instructions.
- B. Self-Expanding Strip Waterstops: Install in construction joints and at other locations indicated, according to manufacturer’s written instructions, adhesive bonding, mechanically fastening, and firmly pressing into place. Install in longest lengths practicable.

3.9 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed.
- B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Engineer.
- C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.
 - a. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- D. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of weakness. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.
 - a. Deposit concrete in horizontal layers of depth to not exceed formwork design pressures and in a manner to avoid inclined construction joints.
 - b. Consolidate placed concrete with mechanical vibrating equipment according to ACI 301.
 - c. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least 6

inches (150 mm) into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.

- E. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
 - a. Consolidate concrete during placement operations so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - b. Maintain reinforcement in position on chairs during concrete placement.
 - c. Screed slab surfaces with a straightedge and strike off to correct elevations.
 - d. Slope surfaces uniformly to drains where required.
 - e. Begin initial floating using bull floats or darbies to form a uniform and open textured surface plane, before excess bleed water appears on the surface. Do not further disturb slab surfaces before starting finishing operations.
- F. Cold-Weather Placement: Comply with ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.
 - a. When average high and low temperature is expected to fall below 40 deg F (4.4 deg C) for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
 - b. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
 - c. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mixture designs.
- G. Hot-Weather Placement: Comply with ACI 301 and as follows:
 - a. Maintain concrete temperature below 90 deg F (32 deg C) at time of placement.
 - b. Chilled mixing water or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
 - c. Fog-spray forms, steel reinforcement, and subgrade just before placing concrete.
 - d. Keep subgrade uniformly moist without standing water, soft spots, or dry areas.

3.10 FINISHING FORMED SURFACES

- A. Rough-Formed Finish: As-cast concrete texture imparted by form-facing material with tie holes and defects repaired and patched. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
 - a. Apply to concrete surfaces not exposed to public view.
- B. Smooth-Formed Finish: As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defects. Remove fins and other projections that exceed 1/8 inch in height.
 - a. Apply to concrete surfaces exposed to public view, to receive a rubbed finish, to be covered with a coating or covering material applied directly to concrete.
- C. Rubbed Finish: Apply the following to smooth-formed finished as-cast concrete where indicated:

- a. Grout-Cleaned Finish: Wet concrete surfaces and apply grout of a consistency of thick paint to coat surfaces and fill small holes. Mix one part portland cement to one and one-half parts fine sand with a 1:1 mixture of bonding admixture and water. Add white portland cement in amounts determined by trial patches so color of dry grout will match adjacent surfaces. Scrub grout into voids and remove excess grout. When grout whitens, rub surface with clean burlap and keep surface damp by fog spray for at least 36 hours.
- D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces, unless otherwise indicated.

3.11 FINISHING FLOORS AND SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, restraighening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Scratch Finish: While still plastic, texture concrete surface that has been screeded and bull-floated or darbied. Use stiff brushes, brooms, or rakes to produce a profile amplitude of $\frac{1}{4}$ inch (6 mm) in 1 direction.
 - a. Apply scratch finish to surfaces indicated and to receive concrete floor toppings to receive mortar setting beds for bonded cementitious floor finishes.
- C. Float Finish: Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraighening until surface is left with a uniform, smooth, granular texture.
 - a. Apply float finish to surfaces indicated to receive trowel finish and to be covered with fluid-applied or sheet waterproofing, built-up or membrane roofing, or sandbed terrazzo.
- D. Trowel Finish: After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
 - a. Apply a trowel finish to surfaces indicated, exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system.
 - b. Finish surfaces to the following tolerances:
 - a. Finish and measure surface so gap at any point between concrete surface and an unveled, freestanding, 10-foot- (3.05-m-) long straightedge resting on 2 high spots and placed anywhere on the surface does not exceed $\frac{1}{8}$ inch (4.8 mm).
- E. Trowel and Fine-Broom Finish: Apply a first trowel finish to surfaces indicated where ceramic or quarry tile is to be installed by either thickset or thin-set method. While concrete is still plastic, slightly scarify surface with a fine broom.
 - a. Comply with flatness and levelness tolerances for trowel finished floor surfaces.
- F. Broom Finish: Apply a broom finish to exterior concrete platforms, steps, and ramps, and elsewhere as indicated.

- a. Immediately after float finishing, slightly roughen trafficked surface by brooming with fiber-bristle broom perpendicular to main traffic route. Coordinate required final finish with Architect before application.
- G. Slip-Resistive Finish: Before final floating, apply slip-resistive aluminum granule finish where indicated and to concrete stair treads, platforms, and ramps. Apply according to manufacturer's written instructions and as follows:
 - a. Uniformly spread 25 lb/100 sq. ft. (12 kg/10 sq. m) of dampened slip-resistive aluminum granules over surface in 1 or 2 applications. Tamp aggregate flush with surface, but do not force below surface.
 - b. After broadcasting and tamping, apply float finish.
 - c. After curing, lightly work surface with a steel wire brush or an abrasive stone and water to expose slip-resistive aluminum granules.

3.12 MISCELLANEOUS CONCRETE ITEMS

- A. Filling In: Fill in holes and openings left in concrete structures, unless otherwise indicated, after work of other trades is in place. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.
- B. Curbs: Provide monolithic finish to interior curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.
- C. Equipment Bases and Foundations: Provide machine and equipment bases and foundations as shown on Drawings. Set anchor bolts for machines and equipment at correct elevations, complying with diagrams or templates from manufacturer furnishing machines and equipment.

3.13 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h (1 kg/sq. m x h) before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.
- E. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
 - a. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
 - i. Water.
 - ii. Continuous water-fog spray.
 - iii. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch (300-mm) lap over adjacent absorptive covers.

- b. **Moisture-Retaining-Cover Curing:** Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches (300 mm), and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.
 - i. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive floor coverings.
 - ii. Moisture cure or use moisture-retaining covers to cure concrete surfaces to receive penetrating liquid floor treatments.
 - iii. Cure concrete surfaces to receive floor coverings with either a moisture-retaining cover or a curing compound that the manufacturer certifies will not interfere with bonding of floor covering used on Project.
- c. **Curing Compound:** Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
 - i. After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound will not interfere with bonding of floor covering used on Project.
- d. **Curing and Sealing Compound:** Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.14 JOINT FILLING

- A. Prepare, clean, and install joint filler according to manufacturer's written instructions.
 - a. Do not fill joints until construction traffic has permanently ceased.
- B. Remove dirt, debris, saw cuttings, curing compounds, and sealers from joints; leave contact faces of joint clean and dry.
- C. Install semirigid joint filler full depth in saw-cut joints and at least 2 inches (50 mm) deep in formed joints. Overfill joint and trim joint filler flush with top of joint after hardening.

3.15 CONCRETE SURFACE REPAIRS

- A. **Defective Concrete:** Repair and patch defective areas as approved by Architect.
 - a. Remove and replace concrete that cannot be repaired and patched to Architect's approval.
- B. **Patching Mortar:** Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.
- C. **Repairing Formed Surfaces:** Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
 - a. Immediately after form removal, cut out honeycombs, rock pockets, and voids more than ½ inch (13 mm) in any dimension in solid concrete, but not less than 1 inch (25 mm) in depth. Make edges of cuts perpendicular to concrete surface. Clean, dampen with water, and brush-coat holes and voids with bonding agent. Fill and compact with patching

- mortar before bonding agent has dried. Fill formtie voids with patching mortar or cone plugs secured in place with bonding agent.
- b. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar will match surrounding color. Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike off slightly higher than surrounding surface.
 - c. Repair defects on concealed formed surfaces that affect concrete's durability and structural performance as determined by Architect.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as floors and slabs, for finish and verify surface tolerances specified for each surface. Correct low and high areas. Test surfaces sloped to drain for trueness of slope and smoothness; use a sloped template.
- a. Repair finished surfaces containing defects. Surface defects include spalls, popouts, honeycombs, rock pockets, crazing and cracks in excess of 0.01 inch (0.25 mm) wide or that penetrate to reinforcement or completely through unreinforced sections regardless of width, and other objectionable conditions.
 - b. After concrete has cured at least 14 days, correct high areas by grinding.
 - c. Correct localized low areas during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
 - d. Correct other low areas scheduled to receive floor coverings with a repair underlayment. Prepare, mix, and apply repair underlayment and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface. Feather edges to match adjacent floor elevations.
 - e. Correct other low areas scheduled to remain exposed with a repair topping. Cut out low areas to ensure a minimum repair topping depth of ¼ inch (6 mm) to match adjacent floor elevations. Prepare, mix, and apply repair topping and primer according to manufacturer's written instructions to produce a smooth, uniform, plane, and level surface.
 - f. Repair defective areas, except random cracks and single holes 1 inch (25 mm) or less in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least a ¾-inch (19-mm) clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
 - g. Repair random cracks and single holes 1 inch (25 mm) or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.
- E. Perform structural repairs of concrete, subject to Engineer's approval, using epoxy adhesive and patching mortar.
- F. Repair materials and installation not specified above may be used, subject to Engineers's approval.

3.16 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage a special inspector and qualified testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Concrete Tests: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
 - a. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd. (4 cu. m), but less than 25 cu. yd. (19 cu. m), plus one set for each additional 50 cu. yd. (38 cu. m) or fraction thereof.
 - b. Testing Frequency: Obtain at least one composite sample for each 100 cu. yd. (76 cu. m) or fraction thereof of each concrete mixture placed each day.
 - i. When frequency of testing will provide fewer than five compressive strength tests for each concrete mixture, testing shall be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 - c. Slump: ASTM C 143/C 143M; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
 - d. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - e. Concrete Temperature: ASTM C 1064/C 1064M; one test hourly when air temperature is 40 deg F (4.4 deg C) and below and when 80 deg F (27 deg C) and above, and one test for each composite sample.
 - f. Compression Test Specimens: ASTM C 31/C 31M.
 - i. Cast and laboratory cure two sets of two standard cylinder specimens for each composite sample.
 - g. Compressive-Strength Tests: ASTM C 39/C 39M; test one set of two laboratory cured specimens at 7 days and one set of two specimens at 28 days.
 - i. Test one set of two field-cured specimens at 7 days and one set of two specimens at 28 days.
 - ii. A compressive-strength test shall be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
 - 1. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
 - 2. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi (3.4 MPa).
 - 3. Test results shall be reported in writing to Architect, Engineer, concrete manufacturer, and Contractor within 48 hours of testing. Reports of compressive-strength tests shall contain Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7- and 28-day tests.
 - h. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but will not be used as sole basis for approval or rejection of concrete.
 - i. Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect. Testing and inspecting agency

may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42/C 42M or by other methods as directed by Architect.

- a. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- b. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.
- c. Measure floor and slab flatness and levelness within 24 hours of finishing. Report to contractor results within 48hrs.

END OF SECTION 03 31 00

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 04 20 00 – REINFORCED UNIT MASONRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes unit masonry assemblies consisting of the following:
1. Concrete masonry units.
 2. Mortar and grout.
 3. Reinforcing steel.
 4. Ties and anchors.
 5. Glazed masonry unit.
 6. Masonry joint reinforcement, flashing and cavity insulation.

1.2 PERFORMANCE REQUIREMENTS

- A. Provide unit masonry that develops the following net-area compressive strengths (f'_m) at 28 days. Determine compressive strength of masonry from net-area compressive strengths of masonry units and mortar types according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.
1. For Concrete Unit Masonry: $f'_m = 1500$ psi.

1.3 SUBMITTALS

- A. Product Data: For each masonry unit, accessory, and other manufactured product indicated.
- B. Shop Drawings: For masonry reinforcing bars; comply with ACI 315, "Details and Detailing of Concrete Reinforcement.
- C. Samples: Showing the full range of colors and textures available for exposed masonry units and colored mortars.
- D. Material Test Reports: For each type of masonry unit, mortar, and grout required.
- E. Material Certificates: For each type of masonry unit required.
1. Grout Mixes: Include description of type and proportions of ingredients.
 2. Masonry Units: Include material test reports substantiating compliance with requirements.

1.4 QUALITY ASSURANCE

- A. Fire-Resistance Ratings: Where indicated, provide materials and construction identical to those of assemblies with fire-resistance ratings determined per ASTM E 119 by a testing and inspecting

agency, by equivalent concrete masonry thickness, or by another means, as acceptable to authorities having jurisdiction.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
 - 1. Protect concrete masonry units from moisture.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.6 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 - 1. Extend cover a minimum of 24 inches (600 mm) down both sides and hold cover securely in place.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar and soil that come in contact with such masonry.
- C. Cold-Weather Requirements: Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements in ACI 530.1/ASCE 6/TMS 602.
- D. Hot-Weather Requirements: When ambient temperature exceeds 100 deg F (38 deg C), or 90 deg F (32 deg C) with a wind velocity greater than 8 mph (13 km/h), do not spread mortar beds more than 48 inches (1200 mm) ahead of masonry. Set masonry units within one minute of spreading mortar.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where subparagraph titles below introduce lists, the following requirements apply for product selection:
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the products specified.
 - 2. Products: Subject to compliance with requirements, provide one of the products specified.

2.2 COLORS AND TEXTURES

- A. Exposed Masonry Units: As selected from manufacturer's full range.

2.3 MASONRY UNITS

- A. Concrete Masonry Units: ASTM C 90.
 - 1. Unit Compressive Strength: 1900-psi- (13.1-MPa-) minimum, average net-area compressive strength.
 - 2. Weight Classification: Lightweight unless otherwise indicated.
 - 3. Type: I, moisture-controlled units.
 - 4. Exposed Faces of Decorative Units: Lightweight aggregate, ground finish.
 - 5. Special Shapes: Provide for lintels, corners, jambs, sash, control joints, headers, bonding, and other special conditions.
- B. Glazed Masonry Units: Lightweight concrete units as indicated above with manufacturer's standard smooth face resinous tile facing, complying with ASTM C 744.

2.4 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement complying with ASTM C 150, Type I or Type III, and hydrated lime complying with ASTM C 207.
- D. Mortar Cement: ASTM C 1329.
- E. Masonry Cement: ASTM C 91.
- F. Pigmented Mortar: Colored cement or cement-lime formulation as required to produce the color indicated, or if not indicated, as selected from manufacturer's standard formulations.
- G. Aggregate for Mortar: ASTM C 144; except for joints less than 1/4 inch (6.5 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.
- H. Aggregate for Grout: ASTM C 404.
- I. Epoxy Pointing Mortar: ASTM C 395, epoxy-resin-based material formulated for use as pointing mortar for structural-clay tile facing units.

- J. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494, Type C, and recommended by the manufacturer for use in masonry mortar of composition indicated.
- K. Water: Potable.

2.5 REINFORCING

- A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M; ASTM A 616/A 616M, including Supplement 1; or ASTM A 617/A 617M, Grade 60 (Grade 400).
- B. Masonry Joint Reinforcement: ASTM A 951; hot-dip galvanized, carbon-steel wire for both interior and exterior.
 - 1. Wire Size for Side Rods: See drawings.
 - 2. Wire Size for Cross Rods: See drawings.
 - 3. Single-Wythe Masonry: Use ladder type with single pair of side rods and cross rods spaced not more than 16 inches (407 mm) o.c.

2.6 TIES AND ANCHORS

- A. Materials, General: As follows, unless otherwise indicated:
 - 1. Galvanized Carbon-Steel Wire: ASTM A 82; with ASTM A 153, Class B-2 coating for both interior and exterior walls.
 - 2. Galvanized Steel Sheet: ASTM A 366/A 366M cold-rolled, carbon-steel sheet hot-dip galvanized after fabrication to comply with ASTM A 153, at exterior walls; and ASTM A 653/A 653M, G60 (Z180), commercial-quality, steel sheet zinc coated by hot-dip process on continuous lines before fabrication at interior walls.
- B. Bent Wire Ties: Rectangular units with closed ends and not less than 4 inches (100 mm) wide, made from 3/16-inch- (4.8-mm-) diameter, galvanized steel wire.

2.7 MISCELLANEOUS ANCHORS

- A. Anchor Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153, Class C; of diameter and length indicated and in the following configurations:
 - 1. Headed bolts.
 - 2. Nonheaded bolts, bent in manner indicated.
- B. Postinstalled Anchors: Anchors as described below, with capability to sustain, without failure, load imposed within factors of safety indicated, as determined by testing per ASTM E 488, conducted by a qualified independent testing agency.
 - 1. Type: Expansion anchors.
 - 2. Corrosion Protection: Carbon-steel components zinc plated to comply with ASTM B 633, Class Fe/Zn 5 (5 microns) for Class SC 1 service condition (mild).
 - 3. For Postinstalled Anchors in Concrete: Capability to sustain, without failure, a load equal to four times the loads imposed.

4. For Postinstalled Anchors in Grouted Masonry Units: Capability to sustain, without failure, a load equal to six times the loads imposed.

2.8 EMBEDDED FLASHING MATERIALS

A. Flashing and Accessories:

1. Comply with requirements in Division 04 Section "Unit Masonry Assemblies."

2.9 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; formulated from neoprene, urethane or PVC.
- B. Preformed Control-Joint Gaskets: Designed to fit standard sash block and to maintain lateral stability in masonry wall. Made from styrene-butadiene-rubber compound complying with ASTM D 2000, Designation M2AA-805.
- C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).
- D. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells with loops for holding reinforcing bars in center of cells. Units are formed from 0.142 inch steel wire hot dip galvanized after fabrication.
- E. Round Plastic Weep/Vent Tubing: Medium-density polyethylene, 3/8-inch (9-mm) OD by 4 inches (100 mm) long.
- F. Rectangular Plastic Weep/Vent Tubing: Clear butyrate, 3/8 by 1-1/2 by 3-1/2 inches (9 by 38 by 89 mm).
- G. Wicking Material: Cotton or polyester rope, 1/4 to 3/8 inch (6 to 10 mm) in diameter, in length required to produce 2-inch (50-mm) exposure on exterior and 18 inches (450 mm) in cavity between wythes.

2.10 INSULATION

- A. Comply with requirements in Division 07 Section "Building Insulation."

2.11 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.12 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, unless otherwise indicated. Do not use calcium chloride in mortar or grout.

- B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification.
1. Extended-Life Mortar for Unit Masonry: Mortar complying with ASTM C 1142 may be used instead of mortar specified above, at Contractor's option.
 2. Limit cementitious materials in mortar to portland cement, mortar cement, and lime.
 3. For masonry below grade, in contact with earth, and where indicated, use Type M.
 4. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; for interior load-bearing walls; and for other applications where another type is not indicated, use Type S.
 5. For interior partitions, Type S.
- C. Pigmented Mortar: Select and proportion pigments with other ingredients to produce color required. Limit pigments to the following percentages of cement content by weight:
1. For portland cement-lime mortar, not more than 10 percent.
 2. For masonry cement or mortar cement mortar, not more than 5 percent.
- D. Grout for Unit Masonry: Comply with ASTM C 476.
1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 5 of ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.
 2. Provide grout with a slump of 8 to 11 inches (200 to 280 mm) as measured according to ASTM C 143.
 3. For CMU applications, use water-resistant grout additives as per manufacturer's recommendations.

2.13 SOURCE QUALITY CONTROL

- A. Engage a qualified independent testing agency to perform source quality-control testing indicated below. Payment for these services will be made by the Contractor.
- B. Concrete Masonry Unit Tests: For each type of concrete masonry unit indicated, units will be tested according to ASTM C 140.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

- A. Cut masonry units with motor-driven saws. Allow units cut with water-cooled saws to dry before placing, unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- B. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
- C. Comply with tolerances in ACI 530.1/ASCE 6/TMS 602 and the following:
1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/4 inch in 20 feet (6 mm in 6 m), nor 1/2 inch (12 mm) maximum.

2. For conspicuous horizontal lines, such as exposed lintels, sills, parapets, and reveals, do not vary from level by more than 1/4 inch in 20 feet (6 mm in 6 m), nor 1/2 inch (12 mm) maximum.

3.2 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Lay exposed masonry in running bond pattern indicated; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
- C. Built-in Work: As construction progresses, build in items specified under this and other Sections of the Specifications. Fill in solidly with masonry around built-in items.
- D. Fill cores in hollow concrete masonry units continuous to foundation under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

3.3 MORTAR BEDDING AND JOINTING

- A. Lay hollow masonry units as follows:
 1. With full mortar coverage on horizontal and vertical face shells.
 2. Bed webs in mortar in starting course on footings and in all courses of piers, columns, and pilasters, and where adjacent to cells or cavities to be filled with grout.
 3. For starting course on footings where cells are not grouted, spread out full mortar bed, including areas under cells.
- B. Lay glazed masonry units as follows:
 1. Lay vertical-cell units with full head joints, unless otherwise indicated. Provide bed joints with full mortar coverage on face shells and webs.
 2. Lay horizontal-cell units with full bed joints, unless otherwise indicated. Form head joints with sufficient mortar so excess will be squeezed out as units are placed in position.
 3. Where epoxy-mortar pointed joints are indicated, rake out setting mortar to a uniform depth of 1/4 inch (6 mm) and point with epoxy mortar.
- C. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than the joint thickness, unless otherwise indicated.

3.4 CAVITIES

- A. Keep cavities clean of mortar droppings and other materials during construction.
 1. Use wood strips temporarily placed in cavity to collect mortar droppings. As work progresses, remove strips, clean off mortar droppings, and replace in cavity.

3.5 MASONRY JOINT REINFORCEMENT

- A. Provide continuous masonry joint reinforcement as indicated. Install with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).
 - 1. Space reinforcement not more than 16 inches on center.
 - 2. Space reinforcement not more than 8 inches on center in foundation parapet walls.
 - 3. Provide reinforcement not more than 8 inches above and below wall openings and extending 24 inches beyond openings unless stated otherwise in drawings.
 - 4. Cut or interrupt joint reinforcement at control and expansion joints, unless otherwise indicated.
- B. Provide continuity at corners and wall intersections by using prefabricated "L" and "T" sections.

3.6 ANCHORING MASONRY

- A. Anchor masonry to structural members where masonry abuts or faces structural members to comply with the following:
 - 1. Provide an open space not less than 1 inch (25 mm) in width between masonry and structural member, unless otherwise indicated.
 - 2. Anchor masonry to structural members with flexible anchors embedded in masonry joints and attached to structure.

3.7 LINTELS

- A. Provide built-in-place masonry lintels. Use specially formed bond beam units with reinforcing bars placed as indicated and filled with coarse grout. Temporarily support built-in-place lintels until cured.
- B. Provide minimum bearing of 16 inches (400 mm) at each jamb, unless otherwise indicated.

3.8 FLASHING, WEEP HOLES, AND VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
 - 1. Extend flashing 4 inches (100 mm) at ends and turn flashing up not less than 2 inches (50 mm) to form a pan.
 - 2. Install metal drip edges beneath flashing at exterior face of wall. Stop flashing 1/2 inch (13 mm) back from outside face of wall and adhere flashing to top of metal drip edge.
 - 3. Install metal flashing termination beneath flashing at exterior face of wall. Stop flashing 1/2 inch (13 mm) back from outside face of wall and adhere flashing to top of metal flashing termination.
- B. Install weep holes in the head joints in exterior wythes of the first course of masonry immediately above embedded flashing.
 - 1. Use round plastic tubing, wicking material, or open head joints to form weep holes.
 - 2. Space weep holes 16 inches (400 mm) o.c.
 - 3. Trim wicking material in weep holes flush with outside face of wall after mortar has set.

3.9 REINFORCED UNIT MASONRY INSTALLATION

- A. Temporary Formwork and Shores: Construct formwork and shores to support reinforced masonry elements during construction.
 - 1. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other temporary loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602. Use prefabricated rebar positioners at 48” on center to hold reinforcing bars in the proper .
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist grout pressure.
 - 1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
 - 2. Low lift grouting procedures shall be utilized for all masonry filled cell construction. Limit pour heights to a maximum of 60 inches and utilize a course grout mix per ASTM C476.

3.10 FIELD QUALITY CONTROL

- A. Inspectors: Engage a qualified independent inspector to perform inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed for inspection. Place grout only after inspectors have verified grout space and grades, size and location of reinforcement.
- B. Engage a qualified independent testing agency to perform field quality-control testing indicated below. Payment for these services will be made by the Contractor.
 - 1. Testing Frequency: Tests and Evaluations listed in these subparagraphs will be performed during construction for each 5000 sq. ft. (465 sq. m) of wall area or portion thereof.
 - 2. Mortar: Properties will be tested per ASTM C 780.
 - 3. Grout: Sampled and tested for compressive strength per ASTM C 1019.

3.11 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance.
- C. Clean unit masonry by dry brushing to remove mortar fins and smears before tooling joints, as work progresses.
- D. After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Test cleaning methods on sample wall panel; leave one-half of panel unclean for comparison purposes.

2. Protect adjacent surfaces from contact with cleaner.
3. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing the surfaces thoroughly with clear water.
4. Clean brick by the bucket-and-brush hand-cleaning method described in BIA Technical Notes No. 20, using job-mixed detergent solution.
5. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
6. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on exposed surfaces.

3.12 MASONRY WASTE DISPOSAL

- A. Masonry Waste Disposal: Dispose of clean masonry waste, including broken masonry units, waste mortar, and excess or soil-contaminated sand, by crushing and mixing with fill material as fill is placed.
 1. Do not dispose of masonry waste as fill within 18 inches (450 mm) of finished grade.
 2. Remove excess, clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 04 20 00

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 04 81 00 - UNIT MASONRY ASSEMBLIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Concrete masonry units.
2. Concrete and Masonry Lintels
3. Mortar and grout.
4. Steel reinforcing bars.
5. Masonry joint reinforcement.
6. Ties and anchors.
7. Embedded flashing.
8. Miscellaneous masonry accessories.

1.2 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.3 PERFORMANCE REQUIREMENTS

- A. Provide structural unit masonry that develops indicated net-area compressive strengths at 28 days.
 1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.
 2. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C 1314.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Product Data: For the following:
 1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.

2. Reinforcing Steel: Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement
 3. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection:
1. Face brick, in the form of straps of five or more bricks.
- D. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.
1. Submittal is for information only. Neither receipt of list nor approval of mockup constitutes approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.
- E. Qualification Data: For testing agency.
- F. Material Certificates: For each type and size of the following:
1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence according to ASTM C 67.
 2. Cementitious materials. Include brand, type, and name of manufacturer.
 3. Grout mixes. Include description of type and proportions of ingredients.
 4. Anchors, ties, and metal accessories.
- G. Mix Designs: For each type of grout include description of type and proportions of ingredients.
1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C 109/C 109M for compressive strength, ASTM C 1506 for water retention, and ASTM C 91 for air content.
 2. Include test reports, according to ASTM C 1019, for grout mixes required to comply with compressive strength requirement.
- H. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.
- I. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.5 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C 1093 for testing indicated.
- B. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.
- D. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.
- E. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Build mockups for each type of exposed unit masonry construction in sizes approximately 48 inches long by 48 inches high by full thickness, including face and backup wythes and accessories.
 - a. Include through-wall flashing.
 - b. Include insulation/dampproofing veneer anchors, flashing, cavity drainage material, and weep holes in exterior masonry-veneer wall mockup.
 - 2. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.7 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 - 1. Extend cover a minimum of 24 inches down both sides of walls and hold cover securely in place.
 - 2. Where one wythe of multi-wythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches down face next to unconstructed wythe and hold cover in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 - 2. Protect sills, ledges, and projections from mortar droppings.
 - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.
 - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1/ASCE 6/TMS 602.

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

- A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects will be exposed in the completed Work.
- B. Fire-Resistance Ratings: Where indicated, provide units that comply with requirements for fire-resistance ratings indicated as determined by testing according to ASTM E 119,

by equivalent masonry thickness, or by other means, as acceptable to authorities having jurisdiction.

2.2 CONCRETE MASONRY UNITS

- A. Regional Materials: Provide CMUs that have been manufactured within 500 miles (800 km) of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.
- B. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
 - 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
 - 2. Provide bullnose units for outside corners unless otherwise indicated.
- C. Integral Water Repellent: Provide units made with integral water repellent for exposed units.
 - 1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested according to ASTM E 514 as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive, with test period extended to 24 hours, shall show no visible water or leaks on the back of test specimen.
 - a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) ACM Chemistries; RainBloc.
 - 2) BASF Aktiengesellschaft; Rheopel Plus.
 - 3) Grace Construction Products, W. R. Grace & Co. - Conn.; Dry-Block.
- D. CMUs: ASTM C 90.
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2150 psi (14.8 MPa) (minimum).
 - 2. Density Classification: Normal weight unless otherwise indicated.
 - 3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
 - 4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.

2.3 CONCRETE AND MASONRY LINTELS

- A. General: Provide one of the following:

- B. Concrete Lintels: ASTM C 1623, built-in-place masonry lintels made from bond beam CMU's matching CMUs in color, texture, and density classification; and with reinforcing bars indicated. Provide lintels with net-area compressive strength not less than CMUs.
- C. Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in Division 03 Section "Cast-in-Place Concrete," and with reinforcing bars indicated. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

2.4 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
- D. Masonry Cement: ASTM C 91.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Capital Materials Corporation; Flamingo Color Masonry Cement.
 - b. Cemex S.A.B. de C.V.; Brikset Type N Citadel Type S Dixie Type S Kosmortar Type N Richmortar Victor Plastic Cement.
 - c. Holcim (US) Inc.; Mortamix Masonry Cement Rainbow Mortamix Custom Buff Masonry Cement White Mortamix Masonry Cement.
 - d. Lafarge North America Inc.; Magnolia Masonry Cement Lafarge Masonry Cement Trinity White Masonry Cement.
 - e. Lehigh Cement Company; Lehigh Masonry Cement Lehigh White Masonry Cement.
 - f. National Cement Company, Inc.; Coosa Masonry Cement.
- E. Mortar Cement: ASTM C 1329.
- F. Colored Cement Product: Packaged blend made from portland cement and hydrated lime masonry cement or mortar cement and mortar pigments, all complying with specified requirements, and containing no other ingredients.
 - 1. Products: Subject to compliance with requirements, provide the following available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Colored Portland Cement-Lime Mix:
 - 1) Capital Materials Corporation; Riverton Portland Cement Lime Custom Color.

- 2) Holcim (US) Inc.; Rainbow Mortamix Custom Color Cement/Lime.
- 3) Lafarge North America Inc.; Eaglebond Portland & Lime.
- 4) Lehigh Cement Company; Lehigh Custom Color Portland/Lime Cement.

b. Colored Masonry Cement:

- 1) Capital Materials Corporation; Flamingo Color Masonry Cement.
- 2) Cemex S.A.B. de C.V.; Richcolor Masonry Cement.
- 3) Essroc, Italcementi Group; Brixment-in-Color.
- 4) Holcim (US) Inc.; Rainbow Mortamix Custom Color Masonry Cement.
- 5) Lafarge North America Inc.; U.S. Cement Custom Color Masonry Cement.
- 6) Lehigh Cement Company; Lehigh Custom Color Masonry Cement.
- 7) National Cement Company, Inc.; Coosa Masonry Cement.

2. Formulate blend as required to produce color indicated or, if not indicated, as selected from manufacturer's standard colors.
3. Pigments shall not exceed 10 percent of portland cement by weight.
4. Pigments shall not exceed 5 percent of masonry cement or mortar cement by weight.

G. Aggregate for Mortar: ASTM C 144.

1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
2. For joints less than 1/4-inch (6 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.
3. White-Mortar Aggregates: Natural white sand or crushed white stone.
4. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.

H. Aggregate for Grout: ASTM C 404.

I. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Euclid Chemical Company (The); Accelguard 80.
 - b. Grace Construction Products, W. R. Grace & Co. - Conn.; Morset.
 - c. Sonneborn Products, BASF Aktiengesellschaft; Trimix-NCA.

J. Water: Potable.

2.5 REINFORCEMENT

- A. Uncoated Steel Reinforcing Bars: ASTM A 615/A 615M or ASTM A 996/A 996M, Grade 60 (Grade 420).
- B. Masonry Joint Reinforcement, General: ASTM A 951/A 951M.
 - 1. Interior Walls: Hot dip galvanized, carbon steel.
 - 2. Exterior Walls: Hot dip galvanized, carbon steel.
 - 3. Wire Size for Side Rods: 0.187-inch diameter.
 - 4. Wire Size for Cross Rods: 0.187-inch diameter.
 - 5. Wire Size for Veneer Ties: 0.187-inch diameter.
 - 6. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches o.c.
 - 7. Provide in lengths of not less than 10 feet, with prefabricated corner and tee units.
- C. Masonry Joint Reinforcement for Single-Wythe Masonry: Either ladder or truss type with single pair of side rods.

2.6 TIES AND ANCHORS (As Needed)

- A. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated.
 - 1. Mill-Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 641/A 641M, Class 1 coating.
 - 2. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A 82/A 82M; with ASTM A 153/A 153M, Class B-2 coating.
 - 3. Galvanized Steel Sheet: ASTM A 653/A 653M, Commercial Steel, G60 (Z180) zinc coating.
 - 4. Steel Sheet, Galvanized after Fabrication: ASTM A 1008/A 1008M, Commercial Steel, with ASTM A 153/A 153M, Class B coating.
- B. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
 - 1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- diameter, hot-dip galvanized steel
 - 2. Tie Section: Triangular-shaped wire tie, sized to extend within 1 inch of masonry face, made from 0.187-inch- or 0.25-inch- diameter, hot-dip galvanized steel stainless-steel wire
- C. Adjustable Anchors for Connecting to Concrete: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
 - 1. Connector Section: Dovetail tabs for inserting into dovetail slots in concrete and attached to tie section; formed from 0.060-inch- thick, steel sheet, galvanized after fabrication.

2.7 MISCELLANEOUS ANCHORS (As Needed)

- A. Unit Type Inserts in Concrete: Cast-iron or malleable-iron wedge-type inserts.
- B. Dovetail Slots in Concrete: Furnish dovetail slots with filler strips, of slot size indicated, fabricated from 0.034-inch (0.86-mm), galvanized steel sheet.
- C. Anchor Bolts: Headed or L-shaped steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153/A 153M, Class C; of dimensions indicated.
- D. Post-installed Anchors: Torque-controlled expansion anchors or chemical anchors.
 - 1. Load Capacity: Capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488, conducted by a qualified independent testing agency.
 - 2. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941 (ASTM F 1941M), Class Fe/Zn 5 unless otherwise indicated.
 - 3. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 (A1) Group 2 (A4) stainless-steel bolts, ASTM F 593 (ASTM F 738M), and nuts, ASTM F 594 (ASTM F 836M).

2.8 EMBEDDED FLASHING MATERIALS

- A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:
- B. Flexible Flashing: Use one of the following unless otherwise indicated:
 - 1. Rubberized-Asphalt Flashing: Composite flashing product consisting of a pliable, adhesive rubberized-asphalt compound, bonded to a high-density, cross-laminated polyethylene film to produce an overall thickness of not less than 0.040 inch (1.02 mm).
 - a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Advanced Building Products Inc.; Peel-N-Seal.
 - 2) Carlisle Coatings & Waterproofing; CCW-705-TWF Thru-Wall Flashing.
 - 3) Dayton Superior Corporation, Dur-O-Wal Division; Dur-O-Barrier Thru-Wall Flashing.
 - 4) Fiberweb, Clark Hammerbeam Corp.; Aquaflash 500.
 - 5) Grace Construction Products, W. R. Grace & Co. - Conn.; Perm-A-Barrier Wall Flashing.

- 6) Heckmann Building Products Inc.; No. 82 Rubberized-Asphalt Thru-Wall Flashing.
 - 7) Hohmann & Barnard, Inc.; Textroflash.
 - 8) W. R. Meadows, Inc.; Air-Shield Thru-Wall Flashing.
 - 9) Polyguard Products, Inc.; Polyguard 300 Polyguard 400.
 - 10) Sandell Manufacturing Co., Inc.; Sando-Seal.
 - 11) Williams Products, Inc.; Everlastic MF-40.
- b. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.
2. Elastomeric Thermoplastic Flashing: Composite flashing product consisting of a polyester-reinforced ethylene interpolymer alloy.
- a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) DuPont; Thru-Wall Flashing.
 - 2) Hohmann & Barnard, Inc.; Flex-Flash.
 - 3) Hyload, Inc.; Hyload Cloaked Flashing System.
 - b. Monolithic Sheet: Elastomeric thermoplastic flashing, 0.040 inch (1.0 mm) thick.
 - c. Accessories: Provide preformed corners, end dams, other special shapes, and seaming materials produced by flashing manufacturer.
3. EPDM Flashing: Sheet flashing product made from ethylene-propylene-diene terpolymer, complying with ASTM D 4637, 0.040 inch (1.0 mm) thick.
- a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Carlisle Coatings & Waterproofing; Pre-Kleened EPDM Thru-Wall Flashing.
 - 2) Firestone Specialty Products; FlashGuard.
 - 3) Heckmann Building Products Inc.; No. 81 EPDM Thru-Wall Flashing.
 - 4) Hohmann & Barnard, Inc.; Epra-Max EPDM Thru-Wall Flashing.
 - 5) Sandell Manufacturing Co., Inc.; EPDM Flashing.
- C. Application: Unless otherwise indicated, use the following:
1. Where flashing is indicated to receive counterflashing, use metal flashing.
 2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
 3. Where flashing is fully concealed, use metal flashing or flexible flashing.
- D. Solder and Sealants for Sheet Metal Flashings.
1. Solder for Copper: ASTM B 32, Grade Sn50, 50 percent tin and 50 percent lead.

2. Elastomeric Sealant: ASTM C 920, chemically curing urethane polysulfide silicone sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.

E. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.

2.9 MISCELLANEOUS MASONRY ACCESSORIES (As needed)

A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene urethane or PVC.

B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.

C. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

D. Weep/Vent Products:

1. Weep Hole/Vent: One-piece, honeycomb design made from polypropylene, designed to fit into a head joint of masonry units; in color selected by Architect.

a. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

- 1) Hohmann & Barnard, Inc.; Quatro-Vent.
- 2) Advanced Building Products, Inc.; Mortar Maze.
- 3) Wire-Bond; #3601 Cell Vent.

E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.

1. Products: Subject to compliance with requirements available products that may be incorporated into the Work include, but are not limited to, the following:

- a. Advanced Building Products Inc.; Mortar Break Mortar Break II.
- b. Archovations, Inc.; CavClear Masonry Mat.
- c. Dayton Superior Corporation, Dur-O-Wal Division; Polytite MortarStop.
- d. Mortar Net USA, Ltd.; Mortar Net.
- e. Hohman & Barnard, Inc.; Mortar Web

2. Provide one of the following configurations:

- a. Strips, full depth of cavity and 10 inches (250 mm) high, with dovetail shaped notches 7 inches (175 mm) deep that prevent clogging with mortar droppings.
 - b. Strips, not less than 3/4 inch (19 mm) 1-1/2 inches (38 mm) thick and 10 inches (250 mm) high, with dimpled surface designed to catch mortar droppings and prevent weep holes from clogging with mortar.
 - c. Sheets or strips full depth of cavity and installed to full height of cavity.
 - d. Sheets or strips not less than 3/4 inch (19 mm) 1 inch (25 mm) thick and installed to full height of cavity with additional strips 4 inches (100 mm) high at weep holes and thick enough to fill entire depth of cavity and prevent weep holes from clogging with mortar.
- F. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and hold reinforcing bars in center of cells. Units are formed from 0.148-inch (3.77-mm) steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.
- 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Dayton Superior Corporation, Dur-O-Wal Division; D/A 810, D/A 812 or D/A 817.
 - b. Heckmann Building Products Inc.; No. 376 Rebar Positioner.
 - c. Hohmann & Barnard, Inc.; #RB or #RB-Twin Rebar Positioner.
 - d. Wire-Bond; O-Ring or Double O-Ring Rebar Positioner.

2.10 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.
- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Diedrich Technologies, Inc.
 - b. EaCo Chem, Inc.
 - c. ProSoCo, Inc.

2.11 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
- 1. Do not use calcium chloride in mortar or grout.

2. For exterior masonry, use portland cement-lime masonry cement or mortar cement mortar.
 3. For reinforced masonry, use portland cement-lime masonry cement or mortar cement mortar.
 4. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C 270, Property Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.
1. For masonry below grade or in contact with earth, use Type M.
 2. For reinforced masonry, use Type S.
 3. For exterior, above-grade, load-bearing and non-load-bearing walls and parapet walls; for interior load-bearing walls; for interior non-load-bearing partitions; and for other applications where another type is not indicated, use Type N.
- D. Pigmented Mortar: Use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products.
1. Pigments shall not exceed 10 percent of portland cement by weight.
 2. Pigments shall not exceed 5 percent of masonry cement or mortar cement by weight.
 3. Mix to match Architect's sample.
 4. Application: Use pigmented mortar for exposed mortar joints with the following units:
 - a. Decorative CMUs.
 - b. Pre-faced CMUs.
 - c. Concrete facing brick.
 - d. Face brick.
 - e. Hollow brick.
 - f. Glazed brick.
 - g. Glazed structural clay facing tile.
 - h. Stone trim units.
 - i. Cast stone trim units.
- E. Grout for Unit Masonry: Comply with ASTM C 476.
1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with Table 1.15.1 in ACI 530.1/ASCE 6/TMS 602 for dimensions of grout spaces and pour height.

2. Proportion grout in accordance with ASTM C 476, Table 1 or paragraph 4.2.2 for specified 28-day compressive strength indicated, but not less than 2000 psi (14 MPa).
3. Provide grout with a slump of 10 to 11 inches as measured according to ASTM C 143/C 143M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
 2. Verify that foundations are within tolerances specified.
 3. Verify that reinforcing dowels are properly placed.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
- B. Build chases and recesses to accommodate items specified in this and other Sections.
- C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.
- D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
 1. Mix units from several pallets or cubes as they are placed.

- F. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. (30 g/194 sq. cm) per minute when tested per ASTM C 67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

A. Dimensions and Locations of Elements:

1. For dimensions in cross section or elevation do not vary by more than plus 1/2 inch (12 mm) or minus 1/4 inch (6 mm).
2. For location of elements in plan do not vary from that indicated by more than plus or minus 1/2 inch (12 mm).
3. For location of elements in elevation do not vary from that indicated by more than plus or minus 1/4 inch (6 mm) in a story height or 1/2 inch (12 mm) total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls do not vary from level by more than 1/4 inch in 10 feet (6 mm in 3 m) maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet (3 mm in 3 m) maximum.
3. For vertical lines and surfaces do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m) maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet (3 mm in 3 m) maximum.
5. For lines and surfaces do not vary from straight by more than 1/4 inch in 10 feet (6 mm in 3 m) maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet (6 mm in 3 m) maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch (1.5 mm) except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm), with a maximum thickness.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch (3 mm).
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch (9 mm) or minus 1/4 inch (6 mm).
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch (3 mm). Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch (3 mm).
5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch (1.5 mm) from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
 - 1. Lay utility type brick in $\frac{3}{4}$ bond coursing.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 2 inches (50 mm) 4-inches (100-mm). Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch (100-mm) horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.
- H. Fill cores in hollow CMUs with grout 24 inches (600 mm) under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- I. Build non-load-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.
 - 1. Install compressible filler in joint between top of partition and underside of structure above.
 - 2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide 1/2-inch (13-mm) clearance between end of anchor rod and end of tube. Space anchors 48 inches (1200 mm) o.c. unless otherwise indicated.
 - 3. Wedge non-load-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.

3.5 MORTAR BEDDING AND JOINTING

- A. Lay hollow brick and CMUs as follows:
 - 1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
 - 2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
 - 3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
 - 4. With entire units, including areas under cells, fully bedded in mortar at starting course on footings where cells are not grouted.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

3.6 CAVITY WALLS

- A. Bond wythes of cavity walls together using one of the following methods:
 - 1. Masonry Joint Reinforcement: Installed in horizontal mortar joints.
 - a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes.
 - b. Where bed joints of wythes do not align, use adjustable (two-piece) type reinforcement with continuous horizontal wire in facing wythe attached to ties.
 - c. Where one wythe is of clay masonry and the other of concrete masonry, use adjustable (two-piece) type reinforcement with continuous horizontal wire in facing wythe attached to ties to allow for differential movement regardless of whether bed joints align.
 - 2. Header Bonding: Provide masonry unit headers extending not less than 3 inches (76 mm) into each wythe. Space headers not over 8 inches (203 mm) 12 inches (305 mm) clear horizontally and 16 inches (406 mm) clear vertically.
 - 3. Masonry Veneer Anchors: Comply with requirements for anchoring masonry veneers.
- B. Bond wythes of cavity walls together using bonding system indicated on Drawings.
- C. Keep cavities clean of mortar droppings and other materials during construction. Bevel beds away from cavity, to minimize mortar protrusions into cavity. Do not attempt to trowel or remove mortar fins protruding into cavity.
- D. Parge cavity face of backup wythe in a single coat approximately 3/8 inch (10 mm) thick. Trowel face of parge coat smooth.
- E. Installing Cavity-Wall Insulation: Place small dabs of adhesive, spaced approximately 12 inches (300 mm) o.c. both ways, on inside face of insulation boards, or attach with plastic fasteners designed for this purpose. Fit courses of insulation between wall ties

and other confining obstructions in cavity, with edges butted tightly both ways. Press units firmly against inside wythe of masonry or other construction as shown.

1. Fill cracks and open gaps in insulation with crack sealer compatible with insulation and masonry.

3.7 MASONRY JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch (16 mm) on exterior side of walls, 1/2 inch (13 mm) elsewhere. Lap reinforcement a minimum of 6 inches (150 mm).
 1. Space reinforcement not more than 16 inches (406 mm) o.c.
 2. Space reinforcement not more than 8 inches (203 mm) o.c. in foundation walls and parapet walls.
 3. Provide reinforcement not more than 8 inches (203 mm) above and below wall openings and extending 12 inches (305 mm) beyond openings in addition to continuous reinforcement.
- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.
- E. Cut and bend reinforcing units as directed by manufacturer for continuity at corners, returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.8 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE (As Needed)

- A. Anchor masonry to structural steel and concrete where masonry abuts or faces structural steel or concrete to comply with the following:
 1. Provide an open space not less than 1 inch (25 mm) wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
 3. Space anchors as indicated, but not more than 24 inches (610 mm) o.c. vertically and 36 inches (915 mm) o.c. horizontally.

3.9 CONTROL AND EXPANSION JOINTS

- A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

- B. Form control joints in concrete masonry using one of the following methods:
1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout and rake out joints in exposed faces for application of sealant.
 2. Install preformed control-joint gaskets designed to fit standard sash block.
 3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar or rake out joint for application of sealant.
 4. Install temporary foam-plastic filler in head joints and remove filler when unit masonry is complete for application of sealant.
 5. Space expansion joints in CMU as recommended by National Concrete Masonry Association (NCMA) TEK 53
- C. Provide horizontal, pressure-relieving joints by either leaving an air space or inserting a compressible filler of width required for installing sealant and backer rod specified in Division 07 Section "Joint Sealants," but not less than 3/8 inch (10 mm).
1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.10 LINTELS

- A. Install steel lintels where indicated.
- B. Provide concrete or masonry lintels where shown and where openings of more than 12 inches (305 mm) for brick-size units and 24 inches (610 mm) for block-size units are shown without structural steel or other supporting lintels.
- C. Provide minimum bearing of 8 inches (200 mm) at each jamb unless otherwise indicated.

3.11 FLASHING, WEEP HOLES, CAVITY DRAINAGE

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated.
- B. Install flashing as follows unless otherwise indicated:
1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 2. At multi-wythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of 8 inches (200 mm), and through inner wythe to within 1/2 inch (13 mm) of the interior face of wall in exposed masonry. Where interior face of wall is to receive furring or framing, carry flashing completely through inner wythe and turn flashing up approximately 2 inches (50 mm) on interior face.

- C. Install weep holes in head joints in exterior wythes of first course of masonry immediately above embedded flashing and as follows:
 - 1. Use specified vent products or open head joints to form weep holes.
 - 2. Space weep holes 24 inches (600 mm) o.c. unless otherwise indicated.
- D. Place pea gravel in cavities as soon as practical to a height equal to height of first course above top of flashing, but not less than 2 inches (50 mm), to maintain drainage.

3.12 REINFORCED UNIT MASONRY INSTALLATION

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
 - 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
 - 2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in ACI 530.1/ASCE 6/TMS 602.
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
 - 1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
 - 2. Limit height of vertical grout pours to not more than 60 inches (1520 mm) 12.67 ft. (3.86 m).

3.13 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:

1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
7. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.14 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 04 81 00

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 05 31 00 - STEEL DECK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Roof deck.
 - 2. Wall/soffit/ceiling Deck
- B. Related Sections include the following:
 - 1. Division 5 Section "Metal Fabrications" for framing deck openings with miscellaneous steel shapes.

1.3 SUBMITTALS

- A. Product Data: For each type of deck, accessory, and product indicated.
- B. Shop Drawings: Show layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.
- C. Product Certificates: For each type of steel deck, signed by product manufacturer.

1.4 QUALITY ASSURANCE

- A. Testing Agency Qualifications: An independent agency qualified according to ASTM E 329 for testing indicated.
- B. Welding: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."
- C. Fire-Test-Response Characteristics: Where indicated, provide steel deck units identical to those tested for fire resistance per ASTM E 119 by a testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Fire-Resistance Ratings: Indicated by design designations of applicable testing and inspecting agency.
 - 2. Steel deck units shall be identified with appropriate markings of applicable testing and inspecting agency.

- D. AISI Specifications: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.
- B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.

PART 2 - PRODUCTS

2.1 METAL DECK

- A. Steel Roof Deck:
 - 1. Galvanized Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33 (230) G90 (Z180) zinc coating.
 - 2. Deck Profile: Type B
 - 3. Profile Depth: 1-1/2 inches (38 mm).
 - 4. Thickness: 22 ga.
 - 5. Span Condition: Triple span or more.
 - 6. Side Laps: Overlapped.
- B. Steel Wall/Soffit Deck:
 - 1. Galvanized Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 33 (230) G90 (Z180) zinc coating.
 - 2. Deck Profile: Type B
 - 3. Profile Depth: 1-1/2 inches (38 mm).
 - 4. Thickness: 22 ga.
 - 5. Span Condition: Triple span or more.
 - 6. Side Laps: Overlapped

2.2 ACCESSORIES

- A. General: Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.
- B. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws. Fasteners for securing roof deck shall have a 0.40-inch diameter head or shall have an equivalent washer.
- C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 10 (4.8-mm) minimum diameter.
- D. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.
- E. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi (230 MPa), not less than 0.0359-inch (0.91-mm) design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.
- F. Galvanizing Repair Paint: ASTM A 780.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance.

3.2 INSTALLATION, GENERAL

- A. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 30, manufacturer's written instructions, and requirements in this Section.
- B. Locate deck bundles to prevent overloading of supporting members.
- C. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.
- D. Place deck panels flat and square and fasten to supporting frame without warp or deflection.
- E. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.
- F. Provide additional reinforcement and closure pieces at openings as required for strength, continuity of deck, and support of other work.
- G. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.

3.3 DECK INSTALLATION

- A. Fasten deck panels to steel supporting members and perimeter edges as indicated on drawings.
- B. Side-Lap Fastening: Fasten side laps of panels between supports, at intervals noted on drawings, and as follows:
 - 1. Mechanically fasten with self-drilling, No. 10 (4.8-mm-) diameter or larger, carbon-steel screws.
- C. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches (38 mm), with end joints as follows:
 - 1. End Joints: Lapped 2 inches (51 mm) minimum.
- D. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels according to deck manufacturer's written instructions. Mechanically fasten to substrate to provide a complete deck installation.
 - 1. Mechanically fasten cover plates at changes in direction of roof-deck panels, unless otherwise indicated.
 - a. **As a minimum install 14 ga 12" wide ridge/hip/valley liners at all conditions.**
- E. Flexible Closure Strips: Install flexible closure strips over partitions, walls, and where indicated. Install with adhesive according to manufacturer's written instructions to ensure complete closure.

3.4 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections and prepare test reports.
- B. Field welds will be subject to inspection.
- C. Testing agency will report inspection results promptly and in writing to Contractor and Architect.
- D. Remove and replace work that does not comply with specified requirements.
- E. Additional inspecting, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.

3.5 REPAIRS AND PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Repair Painting: Wire brush and clean rust spots, welds, and abraded areas on both surfaces of deck immediately after installation, and apply galvanizing repair paint.
- C. Provide final protection and maintain conditions to ensure that steel deck is without damage or deterioration at time of Substantial Completion.

END OF SECTION 05 31 00

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 05 40 00 - COLD-FORMED METAL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-I Specification sections apply to work of this section.

1.2 DESCRIPTION OF WORK:

- A. Work described in this Section includes galvanized steel stud framing systems, and any heavy gauge steel joists and steel rafters indicated, and for use at any new exterior metal stud walls and framing, interior and exterior load-bearing walls, and other locations as indicated on drawings.

1.3 QUALITY ASSURANCE:

- A. Component Design: Calculate structural properties of studs and joists in accordance with the more stringent requirements of the American Iron and Steel Institute (AISI) "Specification for Design of Cold-Formed Steel Structural Members", and their co-sponsored publication "Prescriptive Method for Residential Cold-Formed Steel Framing".
- B. Welding: Use qualified welders and comply with American Welding Society (AWS) DU, "Structural Welding Code -Sheet Steel."
- C. Fire Rated Assemblies: Where framing units are components of assemblies indicated for a fire resistance rating, including those that have been approved by governing authorities that have jurisdiction.
- D. Pre-Installation Conference: Prior to start of installation of metal framing systems, meet at project site with installers of other work including door and window frames and mechanical and electrical work.

1.4 SUBMITTALS:

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections:
 - 1. Product data and installation instructions for each item of cold-formed metal framing and accessories.
 - 2. Shop drawings for special components and installations not fully dimensioned or detailed in manufacturer's product data.
 - 3. Include placing drawings for joists, ceiling, roof related and supplemental and/or related framing system members showing size and gauge designations, number, type, location, and spacing. Indicate supplemental strapping, bracing, splices, bridging, accessories, and details required for proper installation.

4. Include detailed design drawings for headers, including size and gauge designations, locations, assemblies, bearing, anchorage, etc.
5. Shop drawings shall bear the current signed and dated Florida seal and license number of the manufacturer's and/or fabricator's Design Engineer responsible for their design and preparation.

1.5 DELIVERY, STORAGE AND HANDLING:

- A. Comply with manufacturer's current written instructions and recommendations.
- B. Protect metal framing units from rusting and damage.
- C. Deliver to project site in manufacturer's unopened containers or bundles, fully identified with name, brand, type and grade.
- D. Store off ground in a dry ventilated space or protect with breathable waterproof tarpaulins.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. Subject to compliance with requirements.

2.2 METAL FRAMING:

- A. System Components: With each type of metal framing and headers required, provide manufacturer's standard steel runners (tracks), blocking, bridging, lintels, clip angles, shoes, reinforcements, fasteners, and accessories as recommended by manufacturer for applications indicated, as needed to provide a complete metal framing system.
- B. Materials and Finishes:
 1. For 16-gauge and heavier units, fabricate metal framing components of structural quality steel sheet with a minimum yield point of 40,000 psi; ASTM A 446, A 570, or A 611.
 2. For 18-gauge and lighter units, fabricate metal framing components of commercial quality steel sheet with a minimum yield point of 33,000 psi; ASTM A 446, A 570, or A 611.
 3. Provide galvanized finish to metal framing components complying with ASTM A 525 for minimum G60 coating. F
 4. Finish of installation accessories to match that of main framing components, unless otherwise indicated.
- C. "C"-Shape Studs: Manufacturer's standard load-bearing steel studs of size, shape, and gauge indicated, with 1.625-inch flange and flange return lip.
- D. Track: Unless otherwise indicated or required by project conditions, fire-ratings, etc., provide manufacturer's standard Deep Leg Tracks, un-punched unless otherwise indicated, of size, shape and gauge, indicated, with minimum 1-5/8-inch flange.
- E. Deflection Track -Typical at Stud Walls Up To Slab or Similar Fixed Structure at Top of Walls: Provide for no less than 1" of vertical movement
- F. Stud Wall Bridging: 1-1/2-inches x 16-gauge Cold Rolled Channel, unless otherwise indicated, anchored to each stud with 16-gauge clip angles, or welded connections (where allowed by manufacturer), and 16-gauge splice plates, with spacing at 4' -0" or 4' -6" o.c. vertically, through pre-punched slots in studs.
- G. Solid Joist Bridging: 1-5/8-inches x same gauge and depth as joists, unless otherwise indicated, anchored to joists webs with 2-inch x 2-inch x 16-gauge clip angles, or welded with continuous rows spaced at mid-span minimum, or 5' -0" o.c. maximum at clear span where span exceeds 10'-0".

- H. Fasteners: Provide self-drilling, self-tapping #10 sheet metal screws and bolts; threaded studs and expansion shields as required for framing.
- I. Electrodes for Welding: Comply with AWS Code.
- J. Galvanizing Repair Paint: High zinc dust content paint for repair of galvanized surfaces damaged by welding, complying with ASTM A 780.

2.3 FABRICATION:

- A. General: Framing components may be prefabricated into assemblies before erection. Fabricate panels plumb, square, true to line, and braced against racking with joints welded. Perform lifting of prefabricated units to prevent damage or distortion.
- B. Fabricate units in jig templates to hold members in proper alignment and position and to assure consistent component placement.
- C. Fastenings: Attach similar components by welding or screws.
- D. Reinforce, stiffen, and brace framing assemblies to withstand handling, delivery, and erection stresses. Lift fabricated assemblies to prevent damage or permanent distortion.
- E. Fabrication Tolerances: Fabricate units to a maximum allowable tolerance variation from plumb, level, and true to line of 1/8-inch in 10 feet
- F. Headers: Form from at least two equal size C-shapes in a back-to-back or box type configuration.

PART 3 - EXECUTION

3.1 INSTALLATION -GENERAL:

- A. Manufacturer's Instructions: Install metal framing system in accordance with manufacturer's current printed or written instructions and recommendations, unless otherwise indicated.
- B. Runner Tracks:
 - 1. Install continuous tracks sized to match studs. Align tracks accurately to layout at base and tops of studs. Secure tracks at all walls anchored to concrete floor and roof structure as indicated.
 - 2. Track shall be spliced with channel insert fastened with two (2) sheet metal screws, bolts or rivets at each side, each flange, and each corner. Provide fasteners at corners and ends of tracks.
- C. Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar requirements.
- D. Where stud system abuts structural columns or walls, including masonry walls, anchor ends of stiffeners and bridging to supporting structure.
- E. Install supplemental framing, blocking and bracing in metal framing system wherever walls or partitions are indicated to support fixtures, equipment, services, casework, heavy trim and furnishings, and similar work requiring attachment to the wall or partition. Where type of supplementary support is not otherwise indicated, comply with stud manufacturer's recommendations and industry standards in each case, considering weight or loading resulting from item supported.
- F. Erection Tolerances: Bolt or weld panels (at both horizontal and vertical junctures) to produce flush, even, true to line joints. 1/16" out of plane max.

3.2 REPAIRS AND PROTECTION:

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed metal framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

END OF SECTION 05 40 00

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 05 44 00 - COLD-FORMED METAL TRUSSES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-I Specification sections apply to work of this section.

1.2 DESCRIPTION OF WORK:

- A. Work described in this Section includes galvanized metal truss framing system.

1.3 PREINSTALLATION MEETING:

- A. Pre-Installation Conference: Prior to start of installation of metal trusses, meet at project site with contractor and structural engineer.

1.4 SUBMITTALS:

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections:
 - 1. Product data:
 - a. Steel Specification
 - b. Expansion Anchors
 - c. Power Actuated Anchors
 - d. Mechanical Fasteners
 - e. Miscellaneous Clips
 - 2. Shop drawings
 - a. Include layout, spacings, sizes, thicknesses, and types of cold-formed steel trusses; fabrication; and fastening and anchorage details, including mechanical fasteners.
 - b. The design is to include all temporary and permanent bracing, bridging, strapping, connections and fasteners to complete the roof truss system. Sizes shown on the Contract Documents are minimum requirements and the Specialty Engineer will adjust these as necessary to complete his design. The design may assume that the steel roof deck attachment to the truss provides lateral restraint.
 - c. Indicate reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details, and attachment to adjoining work.
 - 1) For cold-formed steel trusses indicated to comply with design loads, shop drawings and calculations shall be signed and sealed by the delegated (specialty)engineer responsible for their preparation.

1.5 QUALITY ASSURANCE:

A. Qualifications:

- 1. Fabricator Qualifications: Company with not less than five (5) documented satisfactory experiences designing and fabricating cold-formed steel framing systems equal in material, design and extent to the systems required for this Project.

2. Installer Qualifications: An experienced installer who has completed cold-formed metal framing similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Engineering Responsibility: Engage a delegated licensed engineer to prepare design calculations, Shop Drawings, and other structural data.
 - C. Delegated Engineer: A licensed engineer who is legally qualified to practice in State of Florida and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of cold-formed metal framing that are similar to those indicated for this Project in material, design, and extent.
 - D. Codes and Standards: Comply with the following, unless more stringent provisions are indicated:
 - 1) Florida Building Code, 2023 Edition.
 - 2) ASCE 7-22, "Minimum Design Loads for Buildings and Other Structures."
 - 3) AWS D1.1, "Structural Welding Code - Steel."
 - 4) AWS D1.3, "Structural Welding Code - Sheet Steel."
 - 5) See "Performance Requirements" for additional codes and standards.

1.6 FIELD MEASUREMENTS

- A. Verify all dimensions and conditions by field measurement. Indicate and flag on shop drawings all discrepancies between actual conditions and contract documents.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect cold-formed steel trusses from corrosion, deformation, and other damage during delivery, storage, and handling.

1.8 PROJECT CONDITIONS

- A. A. During construction, adequately distribute all loads applied to member so as not to exceed the carrying capacity of any framing member.

PART 2 - PRODUCTS

A. MANUFACTURERS

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work.

B. PERFORMANCE REQUIREMENTS

1. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design cold-formed steel framing.
2. Structural Performance: Provide cold-formed steel trusses capable of withstanding design loads within limits and under conditions indicated.
 - a. Design Loads: As indicated on drawings or required by Code.
 - b. Deflection Limits: Design trusses to withstand design loads without deflections greater than the following:
 - 1) Roof Trusses: Vertical deflection of 1/360 of the span.
 - c. Design framing systems to provide for movement of framing members located outside the insulated building envelope without damage or overstressing, sheathing failure, connection failure, undue strain on fasteners and anchors, or other detrimental effects when subject to a maximum ambient temperature change of 120 deg F.

C. Cold-Formed Steel Framing Design Standards:

1. Roof Systems: Design according to AISI S210.
2. Lateral Design: Design according to AISI S213.

3. Roof Trusses: Design according to AISI S214.

2.2 COLD-FORMED STEEL TRUSS MATERIALS

- A. Sizes and grades indicated below are required minimums permitted for use. Sizes indicated on drawings are for reference only and may be adjusted to match project requirements based on final truss configurations developed by Specialty Engineer. Connections of light gage framing to walls, beams or slabs not shown on Contract Documents are to be designed by Specialty Engineer.
- B. Steel Sheet: ASTM A 1003, structural grade, Type H, metallic coated, of grade and coating weight as follows:
 1. Grade: As required by structural performance.
 2. Coating: G90.

2.3 ROOF TRUSSES

- A. Roof Truss Members: Manufacturer's standard steel sections.
 1. Connecting Flange Width: 2 inches, minimum at top and bottom chords connecting to sheathing or other directly fastened construction.
 2. Minimum Chord Base-Metal Thickness: 16 ga.

2.4 ACCESSORIES

- A. Fabricate steel-framing accessories from steel sheet, ASTM A 1003, structural grade, Type H, metallic coated, of same grade and coating weight used for truss members. Provide accessories of manufacturer's standard thickness and configuration unless otherwise indicated.

2.5 ANCHORS, CLIPS, AND FASTENERS

- A. Steel Shapes and Clips: ASTM A 36, zinc coated by hot-dip process according to ASTM A 123.
- B. Expansion Anchors: Fabricated from corrosion-resistant materials, with allowable load or strength design capacities calculated according to ICC-ES AC193 and Appendix D in ACI 318, greater than or equal to the design load, as determined by testing per ASTM E 488 conducted by a qualified testing agency.
- C. Power-Actuated Fasteners: Fastener system of type suitable for application, fabricated from corrosion-resistant materials, with capability to sustain, without failure, allowable load capacities calculated according to ICC-ES AC70, greater than or equal to the design load, as determined by testing per ASTM E 1190 conducted by a qualified testing agency.
- D. Mechanical Fasteners: ASTM C 1513, corrosion-resistant-coated, self-drilling, self-tapping steel drill screws.
 1. Head Type: Low-profile head beneath sheathing; manufacturer's standard elsewhere.
- E. Welding Electrodes: Comply with AWS standards.

2.6 MISCELLANEOUS MATERIALS

- A. Galvanizing Repair Paint: SSPC-Paint 20 or MIL-P-21035B.
- B. Shims: Load bearing, of high-density multimonomer plastic, nonleaching; or of cold-formed steel of same grade and coating as framing members supported by shims.

2.7 FABRICATION

- A. Fabricate cold-formed steel trusses and accessories plumb, square, and true to line, and with connections securely fastened, according to referenced AISI's specifications and standards, manufacturer's written instructions, and requirements in this Section.
 1. Fabricate trusses using jigs or templates.
 2. Cut truss members by sawing or shearing; do not torch cut.
 3. Fasten cold-formed steel truss members by welding, screw fastening, clinch fastening, pneumatic pin fastening, or riveting as standard with fabricator.
 4. Fasten other materials to cold-formed steel trusses by welding, bolting, pneumatic pin fastening, or screw fastening, according to Shop Drawings.

- B. Reinforce, stiffen, and brace trusses to withstand handling, delivery, and erection stresses. Lift fabricated trusses to prevent damage or permanent distortion.
- C. Fabrication Tolerances: Fabricate assemblies level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:
 - 1. Spacing: Space individual framing members no more than plus or minus 1/8 inch from plan location. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.
 - 2. Squareness: Fabricate each cold-formed metal framing assembly to a maximum out of square tolerance of 1/8 inch.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine supporting substrates and abutting cold-formed steel trusses for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install, bridge, and brace cold-formed steel trusses according to AISI S200, AISI S214, AISI's "Code of Standard Practice for Cold-Formed Steel Structural Framing," and manufacturer's written instructions unless more stringent requirements are indicated.
- B. Install cold-formed steel trusses and accessories plumb, square, and true to line, and with connections securely fastened.
 - 1. Fasten cold-formed steel trusses by mechanical fasteners.
 - a. Locate mechanical fasteners and install according to Shop Drawings; comply with requirements for spacing, edge distances, and screw penetration.
- C. Install temporary bracing and supports. Maintain braces and supports in place, undisturbed, until entire integrated supporting structure has been completed and permanent connections to framing are secured.
- D. Truss Spacing: As indicated.
- E. Do not alter, cut, or remove framing members or connections of trusses.
- F. Erect trusses with plane of truss webs plumb and parallel to each other, align, and accurately position at spaces indicated.
- G. Erect trusses without damaging framing members or connections.
- H. Coordinate with wall framing to align webs of bottom chords and load-bearing studs or continuously reinforce track to transfer loads to structure. Anchor trusses securely at all bearing points.
- I. Install continuous bridging and permanently brace trusses as indicated on Shop Drawings and designed according to CFSEI's TechNote 551e, "Design Guide: Permanent Bracing of Cold-Formed Steel Trusses."
- J. Erection Tolerances: Install cold-formed steel framing level, plumb, and true to line to a maximum allowable tolerance variation of 1/8 inch in 10 feet and as follows:
 - 1. Space individual trusses no more than plus or minus 1/8 inch from plan location.
 - a. Cumulative error shall not exceed minimum fastening requirements of sheathing or other finishing materials.

3.3 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform inspections as required by the Special Inspection Plan.
- B. Remove and replace Work that does not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.

3.4 REPAIRS AND PROTECTION

- A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on fabricated and installed cold-formed metal framing with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that cold-formed metal trusses are without damage or deterioration at time of Substantial Completion.

END OF SECTION 05 44 00

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SECTION 05 50 00 - METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items.
- B. Downspout boots.

1.02 REFERENCE STANDARDS

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum 2020.
- B. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2022.
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel 2019.
- D. ASTM A48/A48M - Standard Specification for Gray Iron Castings 2022.
- E. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless 2022.
- F. ASTM A283/A283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates 2018.
- G. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength 2021.
- H. ASTM A501/A501M - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing 2021.
- I. ASTM B210/B210M - Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes 2019a.
- J. ASTM B211/B211M - Standard Specification for Aluminum and Aluminum-Alloy Rolled or Cold Finished Bar, Rod, and Wire 2019.
- K. ASTM B26/B26M - Standard Specification for Aluminum-Alloy Sand Castings 2018, with Editorial Revision.
- L. ASTM B85/B85M - Standard Specification for Aluminum-Alloy Die Castings 2018, with Editorial Revision.
- M. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate 2021a.
- N. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes 2021.

- O. ASTM F3125/F3125M - Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength, and Metric Dimensions 830 MPa and 1040 MPa Minimum Tensile Strength 2022.
- P. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination 2020.
- Q. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification 2021.
- R. AWS D1.1/D1.1M - Structural Welding Code - Steel 2020, with Errata (2023).
- S. AWS D1.2/D1.2M - Structural Welding Code - Aluminum 2014, with Errata (2020).
- T. IAS AC172 - Accreditation Criteria for Fabricator Inspection Programs for Structural Steel AC172 2019.
- U. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer 2004.
- V. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic) 2019.

1.03 SUBMITTALS

- A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
 - 2. Design data: Submit drawings and supporting calculations, signed and sealed by a qualified professional structural engineer.
 - a. Include the following, as applicable:
 - 1) Design criteria.
 - 2) Engineering analysis depicting stresses and deflections.
 - 3) Member sizes and gauges.
 - 4) Details of connections.
 - 5) Support reactions.
 - 6) Bracing requirements.
- B. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.
- C. Designer's Qualification Statement.
- D. Fabricator's Qualification Statement: Provide documentation showing steel fabricator is accredited under IAS AC172.

1.04 QUALITY ASSURANCE

- A. Design aluminum stairs under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.
- B. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.2/D1.2M and dated no more than 12 months before start of scheduled welding work.

- C. Fabricator Qualifications: A qualified steel fabricator that is accredited by IAS AC172.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Sections: ASTM A36/A36M.
- B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.
- C. Plates: ASTM A283/A283M.
- D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish.
- E. Mechanical Fasteners: Same material as or compatible with materials being fastened; type consistent with design and specified quality level.
- F. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.
- G. Bolts, Nuts, and Washers: ASTM F3125/F3125M, Type 1, plain.
- H. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- I. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- J. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 MATERIALS - ALUMINUM

- A. Extruded Aluminum: ASTM B221 (ASTM B221M), 6063 alloy, T6 temper.
- B. Sheet Aluminum: ASTM B209/B209M, 5052 alloy, H32 or H22 temper.
- C. Aluminum-Alloy Drawn Seamless Tubes: ASTM B210/B210M, 6063 alloy, T6 temper.
- D. Aluminum-Alloy Bars: ASTM B211/B211M, 6061 alloy, T6 temper.
- E. Aluminum-Alloy Sand Castings: ASTM B26/B26M.
- F. Aluminum-Alloy Die Castings: ASTM B85/B85M.
- G. Bolts, Nuts, and Washers: Stainless steel.
- H. Welding Materials: AWS D1.2/D1.2M; type required for materials being welded.

2.03 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Continuously seal joined members by continuous welds.
- D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- E. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

- F. Furnish components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.04 FABRICATED ITEMS

- A. Bollards: Steel pipe, concrete filled, crowned cap, as detailed; prime paint finish.
- B. Ledge Angles, Shelf Angles, Channels, and Plates Not Attached to Structural Framing: For support of metal decking; prime paint finish.
- C. Lintels: As detailed; prime paint finish.

2.05 ALUMINUM STAIRS

- A. Design of aluminum members shall conform to the current editions of the Aluminum Association and Guidelines for Aluminum Structures and Florida Building Code.
- B. Materials:
 - 1. Aluminum stair assemblies shall be aluminum construction alloy 6061-T6.
 - 2. All bolt hardware shall be stainless steel grade 304.
 - 3. Railing and guards shall be made from 1-1/4 inch schedule 40 aluminum pipe.
 - 4. Decking/treads shall be slip resistant heavy duty bar grating.
- C. Stair treads and stringers: shall be designed to meet a minimum uniform live load of 100 psf and a concentrated vertical load of 300 pounds over an area of 4 square inches.
- D. Handrails and guards: shall be designed to meet resist a minimum concentrated load of 200 pounds and linear load of 50 plf.
- E. Landings: shall be designed to meet a minimum uniform live load of 100 psf and a concentrated vertical load of 300 pounds over an area of 1 square foot.

2.06 DOWNSPOUT BOOTS

- A. Downspout Boots: Smooth interior without boxed corners or choke points; include integral lug slots and on-body cleanout and cover with neoprene gaskets.
 - 1. Configuration: Angular.
 - 2. Material: Cast iron; ASTM A48/A48M; casting thickness 3/8 inch (9.5 mm), minimum.
 - 3. Finish: Manufacturer's standard factory applied powder coat finish.
 - 4. Color: To be selected by Architect from manufacturer's standard range.
 - 5. Accessories: Manufacturer's standard stainless steel fasteners, stainless steel building wall anchors, and rubber coupling.
 - 6. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Downspoutboots.com, a division of J. R. Hoe & Sons; A-series: www.downspoutboots.com/#sle.
 - b. Jay R. Smith.
 - c. Neenah Foundry.

2.07 FINISHES - STEEL

- A. Prime paint steel items.
- B. Prime Painting: One coat.

2.08 FINISHES - ALUMINUM

- A. Exterior Aluminum Surfaces: high performance organic coating.
- B. Interior Aluminum Surfaces: mill finish.
- C. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils thick.
- D. High Performance Organic Coating System: AAMA 2604 multiple coat, thermally cured fluoropolymer system; color as selected from manufacturer's standard colors.
- E. Apply one coat of bituminous paint to concealed aluminum surfaces in contact with cementitious or dissimilar materials.

2.09 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch.
- C. Maximum Misalignment of Adjacent Members: 1/16 inch.
- D. Maximum Bow: 1/8 inch in 48 inches.
- E. Maximum Deviation From Plane: 1/16 inch in 48 inches.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.
- B. Furnish setting templates to the appropriate entities for steel items required to be cast into concrete or embedded in masonry.

3.03 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components as indicated on drawings.
- D. Perform field welding in accordance with AWS D1.1/D1.1M.
- E. Obtain approval prior to site cutting or making adjustments not scheduled.
- F. After erection, prime welds, abrasions, and surfaces not shop primed, except surfaces to be in contact with concrete.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch.

C. Maximum Out-of-Position: 1/4 inch.

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SECTION 06 10 00 - ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Communications and electrical room mounting boards.
- B. Concealed wood blocking, nailers, and supports.

1.02 RELATED REQUIREMENTS

- A. Section 07 62 00 - Sheet Metal Flashing and Trim: Sill flashings.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2023.
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2023b.
- C. AWWA U1 - Use Category System: User Specification for Treated Wood 2023.
- D. PS 1 - Structural Plywood 2019.
- E. PS 20 - American Softwood Lumber Standard 2021.
- F. RIS (GR) - Standard Specifications for Grades of California Redwood Lumber 2019.
- G. SPIB (GR) - Standard Grading Rules 2021.
- H. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17 2018.
- I. WWPA G-5 - Western Lumber Grading Rules 2021.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
 - 2. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who

provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Southern Pine Inspection Bureau, Inc; SPIB (GR).
- B. Grading Agency: Redwood Inspection Service; RIS (GR).
- C. Grading Agency: West Coast Lumber Inspection Bureau; WCLIB (GR).
- D. Grading Agency: Western Wood Products Association; WWPA G-5.
- E. Sizes: Nominal sizes as indicated on drawings, S4S.
- F. Moisture Content: Kiln-dry or MC15.
- G. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 CONSTRUCTION PANELS

- A. Communications and Electrical Room Mounting Boards: PS 1 A-D plywood, or medium density fiberboard; 3/4 inch thick; flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.

2.04 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.
 - 2. Anchors: Toggle bolt type for anchorage to hollow masonry.
- B. Sill Flashing: See Section 07 62 00.

2.05 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.

PART 3 EXECUTION

3.01 PREPARATION

- A. Where wood framing bears on cementitious foundations, install full width sill flashing continuous over top of foundation, lap ends of flashing minimum of 4 inches and seal.
- B. Where wood-preservative-treated lumber comes in contact with metal decking, install continuous flexible flashing between wood and metal decking.

3.02 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.03 BLOCKING, NAILERS, AND SUPPORTS

3.04 ROOF-RELATED CARPENTRY

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

3.05 INSTALLATION OF CONSTRUCTION PANELS

- A. Communications and Electrical Room Mounting Boards: Secure with screws to studs with edges over firm bearing; space fasteners at maximum 24 inches on center on all edges and into studs in field of board.
 - 1. At fire-rated walls, install board over wall board indicated as part of the fire-rated assembly.
 - 2. Where boards are indicated as full floor-to-ceiling height, install with long edge of board parallel to studs.
 - 3. Install adjacent boards without gaps.

END OF SECTION 06 10 00

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SECTION 07 21 19 - FOAMED-IN-PLACE INSULATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:
 - 1. Open-cell spray polyurethane foam.
 - 2. Ignition barrier coating for spray polyurethane foam.

1.3 ACTION SUBMITTALS

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

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For each product, for tests performed by a qualified testing agency.
- C. Evaluation Reports: For spray-applied polyurethane foam-plastic insulation, from ICC-ES.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An authorized representative who is trained and approved by manufacturer.

PART 2 - PRODUCTS

2.1 OPEN-CELL SPRAY FOAM INSULATION

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Icynene..
 - b. Johns Manville.

c. BASF.

B. Open Cell Spray Foam Insulation: Two-component, polyurethane cellular foam with a nominal density of 0.5 pcf, foam shall have the following minimum physical properties when cured:

1. Apparent Density: 0.5 pcf when tested in accordance with ASTM D 1622.
2. R-Value (aged) when tested in accordance with ASTM C 518: 3.9 at 1 inch, 13 at 3.5 inches, 19 at 5.5 inches.
3. Oxygen Index: 25 when tested in accordance with ASTM D 2863.
4. Compressive Strength: 0.5 psi when tested in accordance with ASTM D 1621.
5. Fungi Resistance: Zero Rating when tested in accordance with ASTM G 21.
6. Air Leakage: Less than 0.02 (L/s)/m² when tested in accordance with ASTM E 283.
7. Sound Transmission Coefficient: 51 (STC) when tested in accordance with ASTM E 90.
8. Noise Reduction Coefficient: 0.7 (NRC) when tested in accordance with ASTM C 423.
9. Open Cell Content: Greater than 90 percent when tested in accordance with ASTM D 2846.
10. Tensile Strength: Less than 5 psi when tested in accordance with ASTM D 1623.
11. Shear Strength: 1.4 psi when tested in accordance with ASTM C 273.
12. Permeability: 21 perm-inch when tested in accordance with ASTM E 96.
13. Dimensional Stability: Less than 15 percent change in volume when tested in accordance with ASTM D 2126.
14. Surface Burning Characteristics:
 - a. Flame Spread/Smoke Developed: At maximum 4 inch (102 mm) thickness, flame spread index of less than 25 and a smoke developed index of less than 450 when tested in accordance with ASTM E 84.
 - b. Corner Test: Thickness up to 12 inches (305 mm) for wall cavities and 16 inches for ceiling cavities meets NFPA 286 when covered with 1/2 inch (13 mm) gypsum board or equivalent thermal barrier.

2.2 IGNITION BARRIER COATING FOR SPRAY POLYURETHANE FOAM

- A. Single-component, water-based, liquid-applied intumescent coating intended for application over the surface of spray-applied foam plastic insulation complying with ICC-ES Acceptance Criteria for Spray-applied Foam Plastic Insulation (AC377).
1. Flame Spread Index: 25 or less
 2. Smoke-Developed Index: 450 or less
 3. Color: Black
- B. Product: International Fireproof Technology, Inc., DC315 Intumescent Coating or approved equal.
- C. Manufacturer's published application instructions and ICC-ES Evaluation Report ESR-3702 must be available on-site at all times.

- D. Coated surfaces must be inspected in accordance with the manufacturer's published installation instructions and must be dry, clean, and free of dirt, loose debris and other substances that could interfere with the adhesion of the coating. The coating must not be applied when the ambient temperature is below 50 degrees F or above 90 degrees F and relative humidity of more than 85%.

2.3 MISCELLANEOUS MATERIALS

- A. Foam Insulation Primer: Material recommended by insulation manufacturer where required for adhesion of insulation to substrates.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Verify that substrates are clean, dry, and free of substances that are harmful to insulation.
- B. Priming: Prime substrates where recommended by insulation manufacturer. Apply primer to comply with insulation manufacturer's written instructions. Confine primers to areas to be insulated; do not allow spillage or migration onto adjoining surfaces.

3.2 INSTALLATION

- A. Comply with insulation manufacturer's written instructions applicable to products and applications.
- B. Spray insulation to envelop entire area to be insulated and fill voids.
- C. Apply in multiple passes to not exceed maximum thicknesses recommended by manufacturer. Do not spray into rising foam.
- D. Framed Construction: Install into cavities formed by framing members to achieve thickness indicated on Drawings.
- E. Cavity Walls: Install into cavities to fully fill void.
- F. Miscellaneous Voids: Apply according to manufacturer's written instructions.

3.3 PROTECTION

- A. Protect installed insulation from damage due to harmful weather exposures, physical abuse, and other causes.

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SECTION 07 27 00 - AIR BARRIERS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fluid-Applied Membrane Air barriers, Vapor Permeable.

1.02 REFERENCE STANDARDS

- A. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension 2016 (Reapproved 2021).
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2021a.
- C. ASTM E2178 - Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials 2021a.

1.03 SUBMITTALS

- A. Product Data: Provide data on material characteristics, performance criteria, and limitations.
- B. Shop Drawings: Provide drawings of special joint conditions.
- C. Manufacturer's Installation Instructions: Indicate preparation, installation methods, and storage and handling criteria.
- D. Manufacturer's qualification statement.
- E. Installer's qualification statement.
- F. Testing agency qualification statement.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.
- B. Manufacturer Qualification: Use evaluated materials from a single manufacturer regularly engaged in air barrier material manufacture, and use secondary materials approved in writing by primary material manufacturer.
- C. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

1.05 MOCK-UPS

- A. Construct air barrier mock-up, 10 feet long by 15 feet wide, indicating examples of surface preparation, crack and joint treatment, air barrier application, and flashing, transition, and termination conditions, to set quality standards for execution.
- B. Mock-up may remain as part of work.

1.06 FIELD CONDITIONS

- A. Maintain temperature and humidity recommended by materials manufacturers before, during, and after installation.

PART 2 PRODUCTS

2.01 AIR BARRIER MATERIALS (AIR IMPERMEABLE AND WATER VAPOR PERMEABLE)

- A. Air Barrier, Fluid Applied: Vapor permeable, elastomeric, UV-resistance, synthetic membrane, formulated for application in a range of 48-70 mils (wet), 25-35 mils (dry).
 - 1. Air Barrier Membrane:
 - a. Air Permeance: 0.004 cfm/sq ft, maximum, when tested in accordance with ASTM E2178.
 - b. Water Vapor Permeance: 12 perms, minimum, when tested in accordance with ASTM E96/E96M using Procedure B - Water Method, at 73.4 degrees F.
 - c. Ultraviolet (UV) and Weathering Resistance: Approved by manufacturer for up to 90 days of weather exposure.
 - d. Elongation: 600 percent, minimum, when tested in accordance with ASTM D412.
 - e. Surface Burning Characteristics: Flame spread index of 25 or less, smoke developed index of 450 or less, Class A when tested in accordance with ASTM E84.
 - f. Products:
 - 1) Tremco Commercial Sealants & Waterproofing (Basis of Design); ExoAir 230: www.tremcosealants.com/#sle.

2.02 ACCESSORIES

- A. General: Accessory materials as described in manufacturer's written installation instructions, recommended to produce complete air barrier assembly meeting performance requirements, and compatible with air barrier membrane material and adjacent materials.
- B. Primer: Liquid primer meeting VOC limitations, recommended for substrate by membrane air barrier manufacturer, when installing modified bituminous self-adhered membranes.
 - 1. Products:
 - a. Tremco Commercial Sealants & Waterproofing (Basis of Design); ExoAir Primer.
- C. Transitions:
 - 1. Counterflashing Strip: Modified bituminous, 40 mils thick self-adhering composite sheet consisting of 32 mils of SBS rubberized asphalt laminated to and 8 mils high-density, cross-laminated polyethylene film, for counterflashing of metal flashings and for substrate transitions and for termination of air barrier to bituminous roof membranes and to air barrier terminations at openings.
 - a. Tremco Commercial Sealants & Waterproofing (Basis of Design); ExoAir TWF Thru-Wall Flashing.

2. High Temperature Flashing Strip and Underlayment; Butyl, 24 mil thick self-adhering composite sheet consisting of 20 mils of butyl laminated to 4 mils of polyethylene film; thermally stable under intermittent, non-continuous exposure up to 240 deg F.
 - a. Tremco Commercial Sealants & Waterproofing (Basis of Design); ExoAir 110 AT
 3. Flexible Flashing: Self-adhesive sheet flashing complying with ASTM D1970/D1970M, except slip resistance requirement waived if not installed on roof. 22 mil thick self-adhering composite sheet consisting of 16 mils of butyl laminate to 6 mil polypropylene film; thermally stable under intermittent, non-continuous exposure up to 240 deg F.
 4. Preformed Silicone-Sealant Extrusion: Manufacturer's standard system consisting of cured low-modulus silicone extrusion, size to fit opening widths with manufacturer's recommended silicone sealant for bonding extrusions to substrates.
 - a. Tremco Commercial Sealants & Waterproofing (Basis of Design); Spectrem SimpleSeal.
 5. Opening Transition Assembly: Cured low-modulus silicone extrusion, with reinforcing ribs, sized to fit opening widths with aluminum race for insertion into aluminum framing extrusions.
 - a. Tremco Commercial Sealants & Waterproofing (Basis of Design); Proglaze ETA Engineered Transition Assembly: www.tremcosealants.com/#sle.
- D. Reinforcing Fabric: High strength mesh fabric consisting of open-weave glass fiber saturated with synthetic resins formulated for high moisture resistance, for reinforcing of liquid applications; not less than 2.5 oz./sq. yd.
1. Tremco Commercial Sealants & Waterproofing (Basis of Design); Tremco 2011
- E. Liquid Joint Sealants:
1. ASTM C 920, single-component, polyurethane, approved by air barrier manufacturer for adhesion and compatibility with membrane air barrier and accessories.
 - a. Tremco Commercial Sealants & Waterproofing (Basis of Design); Dynamic 100.
 2. ASTM C 920, single-component, neutral-curing silicone, approved by air barrier manufacturer for adhesion and compatibility with membrane air barrier and accessories post installation of the membrane.
 - a. Tremco Commercial Sealants & Waterproofing (Basis of Design); Spectrem 1.
- F. Sprayed Polyurethane Foam Sealant: Foamed-in-place, 1.5- to 2.0-lb/cu. ft. density, with flame-spread index of 25 or less per ASTM E 162. for filling gaps at openings and penetrations.
1. Tremco Commercial Sealants & Waterproofing (Basis of Design); Flexible Low Expanding Foam (LEF)

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install materials in accordance with manufacturer's installation instructions.
- B. Air Barriers: Install continuous airtight barrier over surfaces indicated, with sealed seams and with sealed joints to adjacent surfaces.
- C. Apply sealants and adhesives within recommended temperature range in accordance with manufacturer's installation instructions.
- D. Fluid-Applied Coatings or Membranes:
 - 1. Prepare substrate in accordance with manufacturer's installation instructions; treat joints in substrate and between dissimilar materials as indicated.
 - 2. Use flashing to seal to adjacent construction and to bridge joints in coating substrate.
- E. Openings and Penetrations in Exterior Air Barriers:
 - 1. Install flashing over sills, covering entire sill frame member, extending at least 5 inches onto air barrier and at least 6 inches up jambs; mechanically fasten stretched edges.
 - 2. At openings with frames having nailing flanges, seal head and jamb flanges using a continuous bead of sealant compressed by flange and cover flanges with sealing tape at least 4 inches wide; do not seal sill flange.
 - 3. At openings with nonflanged frames, seal air barrier to each side of framing at opening using flashing at least 9 inches wide, and covering entire depth of framing.
 - 4. At head of openings, install flashing under air barrier extending at least 2 inches beyond face of jambs; seal air barrier to flashing.
 - 5. At interior face of openings, seal gap between window/door frame and rough framing, using joint sealant over backer rod.
 - 6. Service and Other Penetrations: Form flashing around penetrating item and seal to air barrier surface.

END OF SECTION 07 27 00

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SECTION 07 41 13 - METAL ROOF PANELS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal roof panel system of preformed aluminum panels.

1.02 REFERENCE STANDARDS

- A. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate 2021a.
- B. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate 2021a.
- C. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection 2021.
- D. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials 2022a, with Editorial Revision (2023).
- E. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference 2005 (Reapproved 2017).

1.03 SUBMITTALS

- A. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Summary of test results, indicating compliance with specified requirements.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Specimen warranty.
- B. Shop Drawings: Include layouts of roof panels, details of edge and penetration conditions, spacing and type of connections, flashings, underlayments, and special conditions.
 - 1. Show work to be field-fabricated or field-assembled.
 - 2. Include structural analysis signed and sealed by qualified structural engineer, indicating compliance of roofing system to specified loading conditions.
- C. Selection Samples: For each roofing system specified, submit color chips representing manufacturer's full range of available colors and patterns.
- D. Verification Samples: For each roofing system specified, submit samples of minimum size six inches square, representing actual roofing metal, thickness, profile, color, and texture.

1. Include typical panel joint in sample.
 2. Include typical fastening detail.
- E. Manufacturer's qualification statement.
- F. Installer's qualification statement.
- G. Test Reports: Indicate compliance of metal roofing system to specified requirements.
- H. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

1.04 QUALITY ASSURANCE

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Provide strippable plastic protection on prefinished roofing panels for removal after installation.
- B. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.

1.06 FIELD CONDITIONS

- A. Do not install metal roof panels, eave protection membrane or underlayment when surface, ambient air, or wind chill temperatures are below 45 degrees F.

1.07 WARRANTY

- A. Finish Warranty: Provide 20-year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking. Complete forms in Owner's name and register with warrantor.
- B. Special Warranty: Provide 20-year warranty for weathertightness of roofing system, including agreement to repair or replace metal roof panels that fail to keep out water commencing on the Date of Substantial Completion. Complete forms in Owner's name and register with warrantor.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Architectural Metal Roof Panel Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Englert, Inc; A1300: www.englertinc.com/#sle.
 2. Fabral; Powerseam II: www.fabral.com/#sle.
 3. Metal Roofing Systems, Inc; System 2500 - Metal Roof Panels : www.metalroofingsystems.biz/#sle.
 4. Petersen Aluminum Corporation; Tite-Loc Plus Panel: www.pac-clad.com/#sle.
- B. Metal Soffit Panels Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 1. Englert, Inc: www.englertinc.com/#sle.
 2. Fabral: www.fabral.com/#sle.

3. Metal Roofing Systems, Inc: www.metalroofingsystems.biz/#sle.
4. Petersen Aluminum Corporation: www.pac-clad.com/#sle.

2.02 PERFORMANCE REQUIREMENTS

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads and wind ratings as indicated on Structural Drawings.
 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
 3. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees F.

2.03 METAL ROOF PANELS

- A. Metal Roof Panels: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 1. Aluminum Panels:
 - a. Alloy and Temper: Aluminum complying with ASTM B209/B209M; temper as required for forming.
 - b. Thickness: Minimum 18 gauge, 0.040 inch.
 2. Profile: Standing seam , with minimum 1-1/2-inch seam height; concealed fastener system for field seaming with special tool. Provide a 180 degree seam style.
 3. Texture: Smooth, with intermediate ribs for added stiffness.
 4. Length: Maximum possible length to minimize lapped joints. Where lapped joints are unavoidable, space laps so that each sheet spans over three or more supports.
 5. Width: Maximum panel coverage of 16 inches.
- C. Metal Soffit Panels:
 1. Profile: Flush, with venting not provided.
 2. Material: Precoated aluminum sheet, 18 gauge, 0.0403 inch minimum thickness.
 3. Color: As selected by Architect from manufacturer's full line.

2.04 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

2.05 FABRICATION

- A. Panels: Provide factory fabricated panels with applied finish and accessory items, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
- B. Joints: Provide captive gaskets, sealants, or separator strips at panel joints to ensure weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.

2.06 FINISHES

- A. Fluoropolymer Coil Coating System: Manufacturer's standard multi-coat aluminum coil coating system complying with AAMA 2605, including at least 70 percent polyvinylidene fluoride (PVDF) resin, and at least 80 percent of coil coated aluminum surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss as selected from manufacturer's standards.

2.07 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
 - 3. Seam Sealant: Factory-applied, non-skinning, non-drying type.
- D. Underlayment: Self-adhering polymer-modified sheet; 30 mil total thickness; with strippable siliconized release film on bottom side and slip resistant and UV-stable facing on top side.
 - 1. Self Sealability: Nail sealability in accordance with ASTM D1970/D1970M.
 - 2. Water Vapor Permeance: 30 perm, maximum, when tested in accordance with ASTM E96/E96M, Desiccant Method A.
 - 3. Functional Temperature Range: From minus 40 degrees F to 250 degrees F.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to ensure that completed roof will be free of leaks.
- B. Remove protective film from surface of roof panels immediately prior to installation; strip film carefully to avoid damage to prefinished surfaces.
- C. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by metal roof panel manufacturer.
- D. Protect surrounding areas and adjacent surfaces from damage during execution of this work.

- E. At locations where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

3.03 INSTALLATION

- A. Overall: Install roofing system in accordance with approved shop drawings and metal roof panel manufacturer's instructions and recommendations, as applicable to specific project conditions; securely anchor components of roofing system in place allowing for thermal and structural movement.
 - 1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 - 2. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel profiles. Use of torches for field cutting is prohibited.
- B. Accessories: Install necessary components that are required for complete roofing assembly, including flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, equipment curbs, rib closures, ridge closures, and similar roof accessory items.
- C. Roof Panels: Install metal roof panels in accordance with manufacturer's installation instructions, minimizing transverse joints except at junction with penetrations.
 - 1. Form weathertight standing seams incorporating concealed clips, using an automatic mechanical seaming device approved by panel manufacturer.
 - 2. Install sealant or sealant tape at end laps and side joints as recommended by metal roof panel manufacturer.

3.04 CLEANING

- A. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.

3.05 PROTECTION

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

END OF SECTION 07 41 13

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SECTION 07 62 00 - SHEET METAL FLASHING AND TRIM

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Fabricated sheet metal items, including flashings, counterflashings, gutters, downspouts, sheet metal roofing, exterior penetrations, and other items indicated in Schedule.
- B. Sealants for joints within sheet metal fabrications.

1.02 REFERENCE STANDARDS

- A. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum 2020.
- B. AAMA 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix) 2022.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2023.
- D. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate 2021a.
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.
- F. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing 2017 (Reapproved 2023).
- G. ASTM D4586/D4586M - Standard Specification for Asphalt Roof Cement, Asbestos-Free 2007 (Reapproved 2018).
- H. CDA A4050 - Copper in Architecture - Handbook current edition.
- I. SMACNA (ASMM) - Architectural Sheet Metal Manual 2012.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week before starting work of this section.

1.04 SUBMITTALS

- A. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- B. Samples: Submit two samples, 4 inches by 4 inches in size, illustrating material of typical standing seam.
- C. Samples: Submit two samples, 4 inches by 4 inches in size, illustrating metal finish color.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA (ASMM) and CDA A4050 requirements and standard details, except as otherwise indicated.
- B. Maintain one copy of each document on site.
- C. Fabricator and Installer Qualifications: Company specializing in sheet metal work with three years of documented experience.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be included into the Work include, but are not limited to the following:
 - 1. ALUCOBOND USA: www.alucobondusa.com/#sle.
 - 2. Fairview Architectural LLC: www.fairview-na.com/#sle.
 - 3. Hickman Edge Systems: www.hickmanedgesystems.com/#sle.
 - 4. Petersen Aluminum Corporation: www.pac-clad.com/#sle.

2.02 SHEET MATERIALS

- A. Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch thick base metal.
- B. Pre-Finished Galvanized Steel: ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24-gauge, 0.0239-inch thick base metal, shop pre-coated with PVDF coating.
 - 1. Fluoropolymer Coating: High performance organic powder coating, AAMA 2604; multiple coat, thermally cured fluoropolymer finish system.
 - 2. Color: As selected by Architect from manufacturer's full colors.
- C. Anodized Aluminum: ASTM B209/B209M, 3005 alloy, H12 or H14 temper; 20 gauge, 0.032 inch thick; clear anodized finish.
 - 1. Color Anodized Finish: AAMA 611, AA-M12C22A42/44, Class I, integrally or electrolytically colored anodic coating not less than 0.7 mil, 0.0007 inch thick.
 - a. Color: As selected by Architect from manufacturer's full colors.
- D. Pre-Finished Aluminum: ASTM B209/B209M; 18 gauge, 0.040 inch thick; plain finish shop pre-coated with fluoropolymer coating.
 - 1. Fluoropolymer Coating: High performance organic powder coating, AAMA 2604; multiple coat, thermally cured fluoropolymer finish system.
 - 2. Color: As selected by Architect from manufacturer's full colors.

2.03 FABRICATION

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of same material as sheet, or from compatible, noncorrosive metal.

- C. Form pieces in longest possible lengths.
- D. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- E. Form material with flat lock seams, except where otherwise indicated; at moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- F. Fabricate corners from one piece with minimum 18-inch long legs; seam for rigidity, seal with sealant.
- G. Fabricate vertical faces with bottom edge formed outward 1/4 inch and hemmed to form drip.

2.04 GUTTERS AND DOWNSPOUTS

2.05 ACCESSORIES

- A. Fasteners: Galvanized steel, with soft neoprene washers.
- B. Underlayment: ASTM D226/D226M, organic roofing felt, Type II, No. 30.
- C. Slip Sheet: Rosin-sized sheathing paper.
- D. Self-Adhering, High Temperature Sheet: Minimum 30 mils thick, consisting of a slip-resistant polyethylene- or polypropylene-film top surface laminated to a layer of butyl- or SBS-modified asphalt adhesive, with release-paper backing; specifically designed to withstand high metal temperatures beneath metal roofing. Provide primer according to written recommendations of underlayment manufacturer.
 - 1. Products: Subject to compliance with requirements available products that may be incorporated into the work include, but are not limited to, the following:
 - a. CCW W IP 300 HT.
 - b. Grace Construction Products; Ultra.
 - c. Henry Company; Blueskin PE200HT.
 - d. Metal-Fab Manufacturing, LLC; MetShield.
 - e. Owens Corning; WeatherLock Metal High-Temperature Underlayment.
- E. Primer Type: Zinc chromate.
- F. Protective Backing Paint: Zinc molybdate alkyd.
- G. Concealed Sealants: Non-curing butyl sealant.
- H. Exposed Sealants: ASTM C920; elastomeric sealant, with minimum movement capability as recommended by manufacturer for substrates to be sealed; color to match adjacent material.
- I. Asphalt Roof Cement: ASTM D4586/D4586M, Type I, asbestos-free.
- J. Reglets: Surface-mounted type, galvanized steel; face and ends covered with plastic tape.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify roof openings, curbs, pipes, sleeves, ducts, and vents through roof are solidly set, reglets in place, and nailing strips located.

- B. Verify roofing termination and base flashings are in place, sealed, and secure.

3.02 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Install surface mounted reglets true to lines and levels, and seal top of reglets with sealant.
- C. Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil, 0.015 inch.

3.03 INSTALLATION

- A. Insert flashings into reglets to form tight fit; secure in place with plastic wedges; seal flashings into reglets with sealant.
- B. Secure flashings in place using concealed fasteners, and use exposed fasteners only where permitted..
- C. Apply plastic cement compound between metal flashings and felt flashings.
- D. Fit flashings tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- E. Exterior Flashing Receivers: Install in accordance with manufacturer's recommendations, and in proper relationship with adjacent construction, and as follows:
 - 1. Secure receiver at perimeter of wall opening with adhesives or fasteners.
 - 2. Place flashing into receiver channel.
- F. Seal metal joints watertight.
- G. Secure gutters and downspouts in place with concealed fasteners.
- H. Slope gutters 1/4 inch per 10 feet, minimum.
- I. Connect downspouts to downspout boots, and grout connection watertight.

END OF SECTION 07 62 00

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SECTION 07 84 00 – FIRESTOPPING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Section 23 05 21, Paragraph 3.3
- B. Section 26 05 44 – Firestop Systems and Sleeves

1.2 SUMMARY

- A. Provide firestop systems consisting of a material, or combination of materials installed to retain the integrity of fire-rated construction by maintaining an effective barrier against the spread of flame, smoke, and/or hot gases through penetrations, blank openings, construction joints, or at perimeter fire containment in or adjacent to fire-rated barriers in accordance with the requirements of the Building Code for this project.
- B. Firestop systems shall be used in locations including, but not limited to, the following:
 - 1. Penetrations through fire-resistive-rated floor and roof assemblies requiring protected openings including both empty openings and openings containing penetrations.
 - 2. Penetrations through fire-resistive-rated wall assemblies including both empty openings and openings that contain penetrations,
 - 3. Membrane penetrations in fire-resistance-rated wall assemblies to allow independent movement.
 - 4. Joints in fire-resistive-rated assemblies to allow independent movement.
 - 5. Perimeter Fire Barrier System between a rated floor/roof and an exterior wall assembly.
 - 6. Joints, through penetrations and membrane penetrations in Smoke Barriers and Smoke Partitions.

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM E 1966 – Standard Test Method for Fire-Resistive Joint Systems
 - 2. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 3. ASTM E 119 – Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 4. ASTM E 814 – Standard Test Method for Fire Tests of Through-Penetration Fire Stops.
 - 5. ASTM E 2174 – Standard Practice for On-Site Inspection of Installed Fire Stops

7. ASTM E 2393 – Standard Practice for On-site Inspection of Installed Fire Stop Joint Systems
8. ASTM E 2307 – Standard Test Method for Determining the Fire Endurance of Perimeter Fire Barrier Systems Using the Intermediate-Scale, Multi Story Test Apparatus (ISMA)

B. Underwriters Laboratories Inc.:

1. UL Qualified Contractor Program
2. UL 263 – Fire Tests of Building Construction and Materials.
3. UL 723 – Tests for Surface Burning Characteristics of Building Materials.
4. UL 1479 – Fire Tests of Through-Penetration Firestops.
5. UL 2079 – Tests for Fire Resistance of Building Joint Systems

C. International Building Code (Current Edition)

D. NFPA

1. NFPA 70 – National Electrical Code (Current Edition)
2. NFPA 101 – Life Safety Code (Current Edition)
3. NFPA 221 – Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls (Current Edition)
4. NFPA 251 – Standard Methods of Tests of Fire Endurance of Building Construction and Materials (Current Edition)

1.4 DEFINITIONS

- A. Firestopping (Through-Penetration Protection System): Sealing or stuffing material or assembly placed in spaces between and penetrations through building materials to arrest movement of fire, smoke, heat, and hot gases through fire rated construction.

1.5 SYSTEM PERFORMANCE REQUIREMENTS

- A. Penetrations: Provide and install firestopping systems that are produced to resist the spread and passage of smoke and other gases according to requirements indicated, including but not limited to the following:

1. Firestop all penetrations passing through fire-resistive-rated wall and floor assemblies and locations as indicated on the drawings.
2. Provide and install complete penetration firestopping systems that have been tested and approved by third party testing.
3. F-Rated Through-Penetration Firestop Systems: Provide through-penetration firestop systems with F ratings, as determined per ASTM E 814, but not less than one-hour or the fire-resistive rating of the construction being penetrated.
4. T-Rated Through-Penetration Firestop Systems: Provide firestop systems with T ratings, in addition to F ratings, as determined per ASTM E 814, where indicated by Code.
5. L-Rated Through-Penetration Firestop Systems: Provide firestop systems with L ratings, in addition to F and T ratings, as determined per UL 1479, where indicated by Code.

- B. Perimeter Fire Containment Systems: Provide interior perimeter joint systems with fire-resistance ratings indicated, as determined per ASTM E 2307, but not less than the fire-resistance rating of the floor construction.

- C. Fire-Resistive Joints: Provide joint systems with fire-resistance ratings indicated, as determined per UL 2079, but not less than the fire-resistance rating of the construction in which the joint occurs.
 - D. For firestopping exposed to view, traffic, moisture, and physical damage, provide appropriate firestop systems for these conditions.
 - E. Where there is no specific third party tested and classified firestop system available for a particular firestop configuration, the firestopping contractor shall obtain from the firestop manufacturer, an Engineering Judgment (EJ) or Equivalent Fire Resistance Rated Assembly (EFFRA) for submittal
 - F. Provide firestopping materials that have maximum VOC limit of 250.
- 1.6 COORDINATION
- A. Coordinate the installation of materials, so that all firestopping sealants used throughout the project are the same color.
- 1.7 SUBMITTALS
- A. Submit Manufacturer’s Product Data Sheets and Manufacturer’s Installation Instructions for each type of product selected. Certify that Firestop Material shall be asbestos free and complies with local regulations.
 - 1. Verification by firestopping manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOC’s) and are nontoxic to building components.
 - B. Submit system design listings, including illustrations from a qualified testing and inspection agency that is applicable to each firestop configuration.
 - 1. Where there is no specific third party tested and classified Firestop System available for a particular firestop configuration, the firestopping contractor shall obtain from the firestop manufacturer and Engineering Judgment (EJ) or Equivalent Fire Resistance Rated Assembly (EFRRRA) for submittal.
 - C. Submit contractor qualifications as noted in “Quality Assurance” article.
- 1.8 QUALITY ASSURANCE
- A. Fire-Test Response Characteristics: Provide Firestopping System Design Listing by a testing and inspection agency in accordance with the appropriate ASTM Standard(s) per Article 1.3. A qualified testing and inspection agency may be UL, FM Research, Intertek Testing Services, Omega Point Laboratories (OPL) or another agency performing testing and follow-up inspection services for firestop materials that is acceptable to the Authority Having Jurisdiction.
 - B. Contractor Qualifications: Acceptable installer firms shall be:
 - 1. FM Approved in accordance with FM Standard 4991 – Approval of Firestop Contractors.
 - 2. UL Qualified Firestop Contractor.
 - 3. Firestop Contractors International Association Contractor Member in good standing.
 - 4. Licensed by the State or Local Authority, where applicable.
 - 5. Shown to have successfully complete not less than 5 comparable scale projects.

- C. Single-Source Responsibility: Obtain firestop systems for each kind of penetration and construction indicated from a single primary firestop systems manufacturer.
 - 1. Materials of different manufacturer than allowed by the tested and listed system shall not be intermixed in the same firestop system or opening.
 - 2. Tested and listed firestop systems are to be used before an Engineering Judgement (EJ) or Equivalent Fire Resistance Rated Assembly (EFRRA) is installed.
- D. Field Constructed Mockup: Prior to installing firestopping, erect mockups for each different firestop system indicated to verify selections made and to demonstrate qualities of materials and execution. Build mockups to comply with the following requirements, using materials indicated for installations.
 - 1. Locate mockups on site in locations indicated, or if not indicated, as directed by the Architect. Include mockup for each type of system.
 - 2. Notify Architect in advance of the dates and times when mockups will be installed.
 - 3. Obtain Architect's acceptance of mockups before start of work.
 - 4. Retain and maintain mockups during construction in an undisturbed condition as a standard for judging completed unit of Work. Accepted mockups in an undisturbed condition at the time of Substantial completion may become part of completed unit of Work.

1.9 ENVIRONMENTAL REQUIREMENTS

- A. Deliver firestopping products to Project site in original, unopened containers or packages with intact and legible manufacturers' labels identifying product and manufacturer.
- B. Store and handle firestopping materials in accordance with the manufacturer's written instructions.
- C. Environmental Conditions: Install firestopping in accordance with the manufacturer's written instructions. Maintain environmental conditions in accordance with the manufacturer's written instructions.
- D. Ventilation: Ventilate per firestopping manufacturers' instructions or Material Safety Data Sheets (MSDS).

1.10 SEQUENCING AND SCHEDULING

- A. A preconstruction meeting shall be scheduled and required for all parties involved prior to the start of construction.
- B. Do not cover up firestopping installations until the Inspection Agency or the Authorities Having Jurisdictions have examined each installation.

1.11 ENVIRONMENTAL REGULATIONS

- A. All material shall be asbestos free and comply with local VOC regulations.
- B. If required, hazardous disposal of firestop materials shall be strictly observed as noted on the individual MSDS.

PART 2 - PRODUCTS

2.1 FIRESTOPPING, GENERAL

- A. Systems listed by approved testing agencies, as identified in Part 1 above, may be used, providing they conform to the construction type, penetrant type, annular space requirements and fire rating involved in each separate instance.
- B. Manufacturer of firestop products shall have been successfully producing and supplying these products for a period of not less than 3 years, and able to show evidence of at least 10 projects where similar products have been installed and accepted.
- C. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Dow Corning Corp.
 - 2. HILTI, Inc.
 - 3. Boss Products, Inc.
 - 4. 3M Fire Protection Products.
 - 5. Nelson Firestop Products
 - 6. Pecora Corporation
 - 7. United States Gypsum Co.
 - 8. Tremco, Inc.
 - 9. Specified Technologies, Inc.
 - 10. Thermafiber, LLC

2.2 ACCESSORIES

- A. Primer: Type recommended by firestopping manufacturer for specific substrate surfaces and suitable for required fire ratings.
- B. Provide permanent dam materials, including mineral fiberboard, mineral fiber matting, sheet metal, plywood, and alumina silicate fire board.
- C. Installation Accessories: Provide clips, collars, fasteners, temporary stops or dams, and other devices required to position and retain materials in place.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and for other conditions affecting performance of firestopping. Notify the responsible party or parties of any unsatisfactory conditions. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Priming: Prime substrates where recommended, by firestopping manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond. Do not allow spillage and migration onto exposed surfaces.
- B. Masking Tape: Use masking tape to prevent firestopping from contacting adjoining surfaces that will remain exposed upon completion of Work. Remove tape as soon as it is possible to do so without disturbing the firestopping seal with substrates.
- C. Verify that system components are clean, dry, and ready for installation.
- D. Verify that field dimensions are as shown on the Drawings and as recommended by the manufacturer.

3.3 INSTALLING PENETRATION FIRESTOPS

- A. General: Comply with the "System Performance Requirements" article in Part 1 and through-penetration firestop manufacturer's installation instructions and drawings pertaining to products and applications indicated.
 - 1. Coordinate with other trades to assure that all pipes, conduit, cable, and other items which penetrate fire rated construction, have been permanently installed prior to installation of firestop assemblies.
 - 2. Schedule the work to assure that partitions and all other construction that conceals penetrations are not erected prior to the installation of firestop and smoke seals.
- B. Install forming/damning materials and other accessories in accordance with the manufacturer's written instructions.
- C. Install fill materials for the through-penetration firestop systems by proven techniques to produce the following results:
 - 1. Completely fill voids and cavities formed by openings, forming materials, accessories, and penetrating items.
 - 2. Install materials so they contact and adhere to substrates formed by openings and penetrating items.
 - 3. For fill materials that will remain exposed after completing the Work, finish to produce smooth, uniform surfaces.

3.4 INSTALLING FIRESTOP JOINT SYSTEMS

- A. General: Comply with the "System Performance Requirements" article in Part 1 and with the firestop manufacturer's installation instructions and drawings pertaining to products and applications indicated.
 - 1. Install joint fillers to provide support of firestop materials during application and at the position required to produce the cross-sectional shapes and depths of installed firestop material relative to joint widths that allow optimum sealant movement capability and develop fire-resistance rating required.
- B. Install systems by proven techniques that result in firestop materials:
 - 1. Directly contacting and fully wetting joint substrates.
 - 2. Completely filling recesses provided for each joint configuration.
 - 3. Providing uniform, cross-sectional shapes and depths relative to joint width that optimize movement capability.

- C. Tool non-sag firestop materials immediately after their application and prior to the time skinning begins. Form smooth, uniform beads configuration indicated or required to:
 - 1. Produce fire-resistance rating.
 - 2. To eliminate air pockets.
 - 3. To ensure contact and adhesion with sides of joint.

3.5 INSTALLING PERIMETER FIRE BARRIER SYSTEMS

- A. General: Comply with the “System Performance Requirements” article in Part 1 and with the firestop manufacturer’s installation instructions and drawings pertaining to products and applications indicated.
- B. Install metal framing, curtain wall insulation, mechanical attachments, safing materials and firestop materials as applicable within the system design.

3.6 FIELD QUALITY CONTROL

- A. Inspection – Independent inspection agency employed and paid by Owner, will examine penetration firestopping in accordance with ASTM E 2174 – Standard Practice for On-Site Inspection of Installed Firestops and ASTM E 2393 – Standard Practice for On-Site Inspection of Installed Firestop Joint Systems. Inspection agency to examine firestopping and will determine, in general, that firestopping has been installed in compliance with requirements of tested and listed firestop system, and installation process conforms to FM 4991 – Standard for Approval of Firestop Contractors or UL Qualified Firestop Contractor Program.
- B. The inspector shall advise the Contractor of any deficiencies noted within one (1) working day.
- C. Do not proceed to enclose firestopping with other construction until inspection agency has verified that the firestop installation complies with the requirements.
- D. Where deficiencies are found, repair or replace the firestopping so that it complies with requirements of tested and listed system design.

3.7 CLEANING AND PROTECTION

- A. Clean off excess fill materials and sealants adjacent to openings and joints as work progresses. Use methods and cleaning materials approved by manufacturers of firestopping products and or assemblies in which openings and joints occur.
- B. Protect firestopping during and after curing period from contact with contaminating substances. If damage caused by others, Owner and Contractor to instruct firestop contractor to make appropriate repairs and charge appropriate trades.

END OF SECTION 07 84 00

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes joint sealants for the following applications, including those specified by reference to this Section:
1. Exterior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - a. Construction joints in cast-in-place concrete.
 - b. Perimeter joints between materials listed above and frames of doors, windows and louvers.
 - c. Control and expansion joints in ceilings and other overhead surfaces.
 - d. Other joints as needed.
 2. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - a. Control and expansion joints on exposed interior surfaces of exterior walls.
 - b. Perimeter joints of exterior openings where indicated.
 - c. Tile control and expansion joints. (mildew resistant)
 - d. Perimeter joints between interior wall surfaces and frames of interior doors or windows.
 - e. Joints between plumbing fixtures and adjoining walls, floors, and counters. (mildew resistant)
 - f. Other joints as needed.
 - g. Control and expansion joints in tile flooring.
 - h. Control and expansion joints in ceilings and other overhead surfaces.

1.2 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.3 SUBMITTALS

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

- B. Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Product Certificates: For each type of joint sealant and accessory, signed by product manufacturer.
- D. SWRI Validation Certificate: For each elastomeric sealant specified to be validated by SWRI's Sealant Validation Program.
- E. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain each type of joint sealant through one source from a single manufacturer.

1.5 PROJECT CONDITIONS

- A. Do not proceed with installation of joint sealants under the following conditions:
 - 1. When ambient and substrate temperature conditions are outside limits permitted by joint-sealant manufacturer or are below 40 deg F.
 - 2. When joint substrates are wet.
 - 3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
 - 4. Contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.6 WARRANTY

- 1. Standard Manufacturers 1-year warranty

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. Compatibility: Provide joint sealants, backings, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer, based on testing and field experience.
Exposed Joint Sealants: As selected by Architect from manufacturer's full range.

2.2 ELASTOMERIC JOINT SEALANTS

- A. Elastomeric Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied chemically curing sealant specified, including those referencing

ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

- B. Stain-Test-Response Characteristics: Where elastomeric sealants are specified to be non-staining to porous substrates, provide products that have undergone testing according to ASTM C 1248 and have not stained porous joint substrates indicated for Project.
- C. Suitability for Immersion in Liquids. Where elastomeric sealants are indicated for Use I for joints that will be continuously immersed in liquids, provide products that have undergone testing according to ASTM C 1247 and qualify for the length of exposure indicated by reference to ASTM C 920 for Class 1 or 2. Liquid used for testing sealants is deionized water, unless otherwise indicated.
- D. Single-Component Neutral-Curing Silicone Sealant (Exterior and Interior)
 - 1. Products: (But not limited to)
 - a. Dow Corning Corporation; 790.
 - b. GE Silicones; SilPruf LM SCS2700.
 - c. Tremco; Spectrem 1 (Basic).
 - d. GE Silicones; SilPruf SCS2000.
 - e. Pecora Corporation; 864.
 - f. Pecora Corporation; 890.
 - g. Polymeric Systems Inc.; PSI-641.
 - h. Sonneborn, Division of ChemRex Inc.; Omniseal.
 - i. Tremco; Spectrem 3.

2.3 PREFORMED JOINT SEALANTS (Where needed)

- A. Preformed Silicone-Sealant System: Manufacturer's standard system consisting of precured low-modulus silicone extrusion, in sizes to fit joint widths indicated, combined with a neutral-curing silicone sealant for bonding extrusions to substrates.
 - 1. Products: (but not limited to)
 - a. Dow Corning Corporation; 123 Silicone Seal.
 - b. GE Silicones; UltraSpan US1100.
 - c. Pecora Corporation; Sil-Span.
 - d. Tremco; Spectrem Ez Seal.

2.4 PREFORMED TAPE SEALANTS (Where needed)

- A. Back-Bedding Mastic Tape Sealant: Preformed, butyl-based elastomeric tape sealant with a solids content of 100 percent; non-staining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape manufacturers for application indicated; packaged on rolls with a release paper backing; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
 - 1. AAMA 804.3 tape, where indicated.

2. AAMA 806.3 tape, for applications in which tape is subject to continuous pressure.
 3. AAMA 807.3 tape, for applications in which tape is not subject to continuous pressure.
- B. Expanded Cellular Tape Sealant: Closed-cell, PVC foam tape sealant; factory coated with adhesive on both surfaces; packaged on rolls with release liner protecting adhesive; and complying with AAMA 800 for the following types:
1. Type 1, for applications in which tape acts as the primary sealant.
 2. Type 2, for applications in which tape is used in combination with a full bead of liquid sealant.

2.5 JOINT-SEALANT BACKING (Where needed)

- A. General: Provide sealant backings of material and type that are non-staining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- Sealant Backings: Neoprene, butyl, EPDM, or silicone tubing complying with ASTM D 1056, nonabsorbent to water and gas, and capable of remaining resilient at temperatures down to minus 26 deg F. Provide products with low compression set and of size and shape to provide a secondary seal, to control sealant depth, and to otherwise contribute to optimum sealant performance.
- C. Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint where such adhesion would result in sealant failure. Provide self-adhesive tape where applicable.

2.6 MISCELLANEOUS MATERIALS (As needed)

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of sealants to joint substrates.
- C. Masking Tape: Non-staining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions and the following requirements:
 - 1. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints (except for permanent, protective coatings tested and approved for sealant adhesion and compatibility by sealant manufacturer), old joint sealants, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
 - 2. Clean porous joint substrate surfaces by brushing, grinding, blast cleaning, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air. Porous joint substrates include the following:
 - a. Concrete.
 - b. Unglazed surfaces of ceramic tile.
 - 3. Remove laitance and form-release agents from concrete.
 - 4. Clean nonporous surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous joint substrates include the following:
 - a. Metal.
 - b. Glass.
 - c. Glazed surfaces of ceramic tile.
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer, based on preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.3 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated, unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- E. Install sealants using proven techniques that comply with the following and at the same time backings are installed:
 - 1. Place sealants so they directly contact and fully wet joint substrates.
 - 2. Completely fill recesses in each joint configuration.
 - 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- F. Tooling of Non-sag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
 - 1. Remove excess sealant from surfaces adjacent to joints.
 - 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 - 3. Provide concave joint configuration per Figure 5A in ASTM C 1193, unless otherwise indicated.
 - 4. Provide flush joint configuration where indicated per Figure 5B in ASTM C 1193.
 - 5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 5C in ASTM C 1193.
 - a. Use masking tape to protect surfaces adjacent to recessed tooled joints.
- G. Installation of Preformed Tapes: Install according to manufacturer's written instructions.
- H. Installation of Preformed Silicone-Sealant System: Comply with the following requirements:
 - 1. Apply masking tape to each side of joint, outside of area to be covered by sealant system.

2. Apply silicone sealant to each side of joint to produce a bead of size complying with preformed silicone-sealant system manufacturer's written instructions and covering a bonding area of not less than 3/8 inch (10 mm). Hold edge of sealant bead 1/4 inch (6 mm) inside masking tape.
 3. Within 10 minutes of sealant application, press silicone extrusion into sealant to wet extrusion and substrate. Use a roller to apply consistent pressure and ensure uniform contact between sealant and both extrusion and substrate.
 4. Complete installation of sealant system in horizontal joints before installing in vertical joints. Lap vertical joints over horizontal joints. At ends of joints, cut silicone extrusion with a razor knife.
- I. Installation of Preformed Foam Sealants: Install each length of sealant immediately after removing protective wrapping, taking care not to pull or stretch material, producing seal continuity at ends, turns, and intersections of joints. For applications at low ambient temperatures where expansion of sealant requires acceleration to produce seal, apply heat to sealant in compliance with sealant manufacturer's written instructions.

3.4 FIELD QUALITY CONTROL

1. Inspect joints for complete fill, for absence of voids, and for joint configuration complying with specified requirements. Record results in a field-adhesion-test log.
 2. Inspect tested joints and report on the following:
 - a. Whether sealants in joints connected to pulled-out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field-adhesion hand-pull test criteria.
 - b. Whether sealants filled joint cavities and are free of voids.
 - c. Whether sealant dimensions and configurations comply with specified requirements.
 3. Record test results in a field-adhesion-test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
 4. Repair sealants pulled from test area by applying new sealants following same procedures used originally to seal joints. Ensure that original sealant surfaces are clean and that new sealant contacts original sealant.
- B. Evaluation of Field Test Results: Sealants not evidencing adhesive failure from testing or noncompliance with other indicated requirements will be considered satisfactory. Remove sealants that fail to adhere to joint substrates during testing or to comply with other requirements. Retest failed applications until test results prove sealants comply with indicated requirements.

3.5 CLEANING

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

3.6 PROTECTION

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

END OF SECTION 07 92 00

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 08 11 13 - HOLLOW METAL DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Non-fire-rated hollow metal doors and frames.
- B. Fire-rated hollow metal doors and frames.

1.02 RELATED REQUIREMENTS

- A. Section 08 71 00 - Door Hardware.
- B. Section 08 80 00 - Glazing: Glass for doors and borrowed lites.
- C. Section 09 91 13 - Exterior Painting: Field painting.
- D. Section 09 91 23 - Interior Painting: Field painting.

1.03 ABBREVIATIONS AND ACRONYMS

- A. ANSI: American National Standards Institute.
- B. HMMA: Hollow Metal Manufacturers Association.
- C. NAAMM: National Association of Architectural Metal Manufacturers.
- D. NFPA: National Fire Protection Association.
- E. SDI: Steel Door Institute.
- F. UL: Underwriters Laboratories.

1.04 REFERENCE STANDARDS

- A. ADA Standards - 2010 ADA Standards for Accessible Design 2010.
- B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors 2022.
- C. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100) 2023.
- D. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames 2020.
- E. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2023.
- F. ASTM A1008/A1008M - Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable 2021a.

- G. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength 2023.
- H. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete 2020.
- I. ASTM C476 - Standard Specification for Grout for Masonry 2023.
- J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials 2023b.
- K. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- L. ITS (DIR) - Directory of Listed Products Current Edition.
- M. NAAMM HMMA 840 - Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames 2017.
- N. NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2022.
- O. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 2022.
- P. UL (DIR) - Online Certifications Directory Current Edition.
- Q. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies Current Edition, Including All Revisions.

1.05 SUBMITTALS

- A. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.
- B. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.
- C. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.
- D. Manufacturer's Certificate: Certification that products meet or exceed specified requirements.
- E. Manufacturer's Qualification Statement.
- F. Installer's Qualification Statement.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years documented experience.
- B. Maintain at project site copies of reference standards relating to installation of products specified.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.
- B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with requirements, manufacturers offering products which may be included into the Work include, but are not limited to the following:
 - 1. Ceco Door, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 2. Curries, an Assa Abloy Group company: www.assaabloydss.com/#sle.
 - 3. Steelcraft, an Allegion brand: www.allegion.com/#sle.

2.02 PERFORMANCE REQUIREMENTS

- A. Requirements for Hollow Metal Doors and Frames:
 - 1. Steel Sheet: Comply with one or more of the following requirements; galvanized steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for each.
 - 2. Accessibility: Comply with ICC A117.1 and ADA Standards.
 - 3. Door Edge Profile: Manufacturers standard for application indicated.
- B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

2.03 HOLLOW METAL DOORS

- A. Door Finish: Factory primed and field finished.
- B. Exterior Doors: Thermally insulated.
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 - Heavy-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 2 - Seamless.
 - d. Door Face Metal Thickness: 18 gauge, 0.042 inch, minimum.
 - 2. Door Core Material: Polystyrene, 1 lbs/cu ft minimum density.
 - a. Foam Plastic Insulation: Manufacturer's standard board insulation with maximum flame spread index (FSI) of 75, and maximum smoke developed index (SDI) of 450 in accordance with ASTM E84, and completely enclosed within interior of door.
 - 3. Door Thickness: 1-3/4 inches, nominal.
- C. Interior Doors:
 - 1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
 - a. Level 2 - Heavy-duty.
 - b. Physical Performance Level C, 250,000 cycles; in accordance with ANSI/SDI A250.4.
 - c. Model 2 - Seamless.

- d. Door Face Metal Thickness: 20 gauge, 0.032 inch, minimum.
2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
3. Provide units listed and labeled by UL (DIR) or ITS (DIR).
 - a. Attach fire rating label to each fire rated unit.
4. Door Thickness: 1-3/4 inches, nominal.
5. Door Face Sheets: Flush.
6. Door Finish: Factory primed and field finished.

2.04 HOLLOW METAL FRAMES

- A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.
- B. Exterior Door Frames: Knock-down type.
 1. Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A40/ZF120 coating.
 2. Frame Metal Thickness: 14 gauge, 0.067 inch, minimum.
 3. Frame Finish: Factory primed and field finished.
 4. Weatherstripping: Separate, see Section 08 71 00.
- C. Interior Door Frames, Non-Fire Rated: Slip-on type at gypsum board walls, and knock-down type at masonry walls.
 1. Frame Metal Thickness: 14 gauge, 0.067 inch, minimum.
 2. Frame Finish: Factory primed and field finished.
- D. Door Frames, Fire-Rated: Slip-on type at gypsum board walls, and knock-down type at masonry walls.
 1. Fire Rating: Same as door, labeled.
 2. Frame Metal Thickness: 14 gauge, 0.067 inch, minimum.
 3. Frame Finish: Factory primed and field finished.

2.05 FINISHES

- A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

2.06 ACCESSORIES

- A. Light Openings and Glazing: Frames with glazing securely fastened within opening.
 1. Frame Material: 14 gauge, 0.067 inch, galvanized steel.
- B. Glazing: As specified in Section 08 80 00, factory installed.
- C. Removable Stops: Formed sheet steel, mitered or butted corners; prepared for countersink style tamper proof screws.
- D. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.
- E. Silencers: Except on weather-dripped or gasketed doors, drill stops to receive door silencers. Silencers to be supplied by frame manufacturer

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that opening sizes and tolerances are acceptable.
- C. Verify that finished walls are in plane to ensure proper door alignment.

3.02 PREPARATION

- A. Coat inside of frames to be installed in masonry or to be grouted, with bituminous coating, prior to installation.

3.03 INSTALLATION

- A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.
- B. Install fire rated units in accordance with NFPA 80.
- C. Coordinate frame anchor placement with wall construction.
- D. Grout frames in masonry construction, using hand trowel methods; brace frames so that pressure of grout before setting will not deform frames.
- E. Install door hardware as specified in Section 08 71 00.
- F. Comply with glazing installation requirements of Section 08 80 00.

3.04 TOLERANCES

- A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.

3.05 ADJUSTING

- A. Adjust for smooth and balanced door movement.

END OF SECTION 08 11 13

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 08 43 13 - ALUMINUM-FRAMED WINDOWS

1.1 SUMMARY

A. Section Includes:

1. Aluminum Windows

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: For aluminum-framed storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.

1. Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
2. Include full-size isometric details of each type of vertical-to-horizontal intersection of aluminum-framed storefronts, showing the following:

- a. Joinery, including concealed welds.
- b. Anchorage.
- c. Expansion provisions.
- d. Glazing.
- e. Flashing and drainage.

3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.

C. Samples for Initial Selection: For units with factory-applied color finishes.

D. Delegated-Design Submittal: For aluminum-framed windows indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Energy Performance Certificates: For aluminum-framed storefronts, accessories, and components, from manufacturer.

1. Basis for Certification: NFRC-certified energy performance values for each aluminum-framed storefront.

C. Product Test Reports: For aluminum-framed storefronts, for tests performed by manufacturer and witnessed by a qualified testing agency.

D. Sample Warranties: For special warranties.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For aluminum-framed storefronts to include in maintenance manuals.
- B. Maintenance Data for Structural Sealant: For structural-sealant-glazed storefront to include in maintenance manuals. Include ASTM C 1401 recommendations for post-installation-phase quality-control program.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Structural-Sealant Glazing: Comply with ASTM C 1401 for design and installation of storefront systems.
- C. Quality-Control Program: Developed specifically for Project, including fabrication and installation, according to recommendations in ASTM C 1401. Include periodic quality-control reports.
- D. Source quality-control reports.
- E. Field quality-control reports.

1.6 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures, including, but not limited to, excessive deflection.
 - b. Noise or vibration created by wind and thermal and structural movements.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - d. Water penetration through fixed glazing and framing areas.
 - e. Failure of operating components.
 - 2. Warranty Period: 10 years from date of Substantial Completion.
- B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 - 2. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Kawneer North America, an Alcoa company (Basis of Design: IR 501, 2-1/2" x 5" – Florida Product approval #FL8787).
 2. EFCO Corporation.
 3. TRACO.
 4. Vistawall Architectural Products; The Vistawall Group; a Bluescope Steel company.
 5. YKK AP America Inc.
- B. Source Limitations: Obtain all components of aluminum-framed storefront system and windows, including framing and accessories, from single manufacturer.

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer to design aluminum-framed storefronts.
- B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
1. Aluminum-framed storefronts shall withstand movements of supporting structure, including, but not limited to, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
 2. Failure also includes the following:
 - a. Thermal stresses transferring to building structure.
 - b. Glass breakage.
 - c. Noise or vibration created by wind and thermal and structural movements.
 - d. Loosening or weakening of fasteners, attachments, and other components.
 - e. Failure of operating units.
- C. Structural Loads:
1. Wind Loads: As indicated on Structural Drawings.
 2. Other Design Loads: As indicated on Structural Drawings.
- D. Energy Performance: Certify and label energy performance according to NFRC as follows:
1. Thermal Transmittance (U-factor): Fixed glazing and framing areas as a system shall have U-factor of not more than 0.57 Btu/sq. ft. x h x deg F (3.23 W/sq. m x K) as determined according to NFRC 100.
 2. Solar Heat Gain Coefficient (SHGC): Fixed glazing and framing areas as a system shall have a SHGC of no greater than 0.45 as determined according to NFRC 200.
 3. Condensation Resistance: Fixed glazing and framing areas as a system shall have an NFRC-certified condensation resistance rating of no less than 45 as determined according to NFRC 500.

- E. Noise Reduction: Test according to ASTM E 90, with ratings determined by ASTM E 1332, as follows.
 - 1. Outdoor-Indoor Transmission Class: Minimum 30.
- F. Windborne-Debris Impact Resistance: Pass missile-impact and cyclic-pressure tests according to ASTM E 1996 for Wind Zone 3 and meeting ICC 500, 305.1.1.
 - 1. Large-Missile Test: For glazed openings located within 30 feet (9.1 m) of grade.
 - 2. Small-Missile Test: For glazed openings located more than 30 feet (9.1 m) above grade.
- G. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
 - 2. Thermal Cycling: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested according to AAMA 501.5.
 - a. Interior Ambient-Air Temperature: 75 deg F (24 deg C).
- H. Structural-Sealant Joints:
 - 1. Designed to carry gravity loads of glazing.
- I. Structural Sealant: ASTM C 1184. Capable of withstanding tensile and shear stresses imposed by structural-sealant-glazed, aluminum-framed storefronts without failing adhesively or cohesively. When tested for preconstruction adhesion and compatibility, cohesive failure of sealant shall occur before adhesive failure.
 - 1. Adhesive failure occurs when sealant pulls away from substrate cleanly, leaving no sealant material behind.
 - 2. Cohesive failure occurs when sealant breaks or tears within itself but does not separate from each substrate, because sealant-to-substrate bond strength exceeds sealant's internal strength.

2.3 WINDOW SYSTEMS

- A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
 - 1. Exterior Framing Construction: Thermally improved.
 - 2. Glazing System: Retained mechanically with gaskets on four sides.
 - 3. Glazing Plane: Center.
 - 4. Finish: High-performance organic finish.
 - 5. Fabrication Method: Either factory or field-fabricated stick system.
 - 6. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
 - 7. Steel Reinforcement: As required by manufacturer.
- B. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.
- C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.

2.4 GLAZING

- A. Glazing, gaskets & sealants: Comply with Division 08 Section "Glazing."

2.5 MATERIALS

- A. Sheet and Plate: ASTM B 209 (ASTM B 209M).
- B. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221 (ASTM B 221M).
- C. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
- D. Structural Profiles: ASTM B 308/B 308M.
- E. Steel Reinforcement:
 - 1. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
 - 2. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
 - 3. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.
 - 4. Primer: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM and prepare surfaces according to applicable SSPC standard.

2.6 ACCESSORIES

- A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding fasteners, and accessories compatible with adjacent materials.
 - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
 - 2. Reinforce members as required to receive fastener threads.
 - 3. Use exposed fasteners with countersunk Phillips's screw heads, finished to match framing system, fabricated from 300 series stainless steel.
- B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch (25.4 mm) that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
 - 1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123/A 123M or ASTM A 153/A 153M requirements.
- C. Concealed Flashing: Manufacturer's standard corrosion-resistant, non-staining, nonbleeding flashing compatible with adjacent materials.
- D. Bituminous Paint: Cold-applied asphalt-mastic paint containing no asbestos, formulated for 30-mil (0.762-mm) thickness per coat.

2.7 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Weld in concealed locations to greatest extent possible to minimize distortion or discoloration of finish. Remove weld spatter and welding oxides from exposed surfaces by descaling or grinding.
- C. Fabricate components that, when assembled, have the following characteristics:
 - 1. Profiles that are sharp, straight, and free of defects or deformations.

2. Accurately fitted joints with ends coped or mitered.
 3. Physical and thermal isolation of glazing from framing members.
 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
 5. Provisions for field replacement of glazing from interior.
 6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- D. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- E. Structural-Sealant-Glazed Framing Members: Include accommodations for using temporary support device to retain glazing in place while structural sealant cures.
- F. Storefront Framing: Fabricate components for assembly using screw-spline system.
- G. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

2.8 ALUMINUM FINISHES

- A. High-Performance Organic Finish: Two-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

1. Color and Gloss: As selected by Architect from manufacturer's full range.

2.9 SOURCE QUALITY CONTROL

- A. Structural Sealant: Perform quality-control procedures complying with ASTM C 1401 recommendations, including, but not limited to, assembly material qualification procedures, sealant testing, and assembly fabrication reviews and checks.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare surfaces that are in contact with structural sealant according to sealant manufacturer's written instructions, to ensure compatibility and adhesion. Preparation includes, but is not limited to, cleaning and priming surfaces.

3.3 INSTALLATION

- A. General:
1. Comply with manufacturer's written instructions.
 2. Do not install damaged components.
 3. Fit joints to produce hairline joints free of burrs and distortion.
 4. Rigidly secure nonmovement joints.
 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.

6. Seal perimeter and other joints watertight unless otherwise indicated.
- B. Metal Protection:
1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
 2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- C. Set continuous sill members and flashing in full sealant bed, as specified in Division 07 Section "Joint Sealants" to produce weathertight installation.
- D. Install components plumb and true in alignment with established lines and grades.
- E. Install operable units' level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.
- F. Install glazing as specified in Division 08 Section "Glazing".
- G. Install weather seal sealant according to Division 07 Section "Joint Sealants" and according to sealant manufacturer's written instructions to produce weatherproof joints. Install joint filler behind sealant as recommended by sealant manufacturer.
- 3.4 ERECTION TOLERANCES
- A. Erection Tolerances: Install aluminum-framed storefronts to comply with the following maximum tolerances:
1. Plumb: 1/8 inch in 10 feet (3.2 mm in 3 m); 1/4 inch in 40 feet (6.35 mm in 12.2 m).
 2. Level: 1/8 inch in 20 feet (3.2 mm in 6 m); 1/4 inch in 40 feet (6.35 mm in 12.2 m).
 3. Alignment:
 - a. Where surfaces abut, in-line or are separated by reveal or protruding element up to 1/2 inch (12.7 mm) wide, limit offset from true alignment to 1/16 inch (1.6 mm).
 - b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch (12.7 to 25.4 mm) wide, limit offset from true alignment to 1/8 inch (3.2 mm).
 - c. Where surfaces are separated by reveal or protruding element of 1 inch (25.4 mm) wide or more, limit offset from true alignment to 1/4 inch (6 mm).
 4. Location: Limit variation from plane to 1/8 inch in 12 feet (3.2 mm in 3.6 m); 1/2 inch (12.7 mm) over total length.

3.5 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Field Quality-Control Testing: Perform the following test on representative areas of aluminum-framed storefronts.
1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect shall be tested according to AAMA 501.2 and shall not evidence water penetration.
 - a. Perform a minimum of two tests in areas as directed by Architect.

- b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to 70 percent completion.
 - 2. Air Infiltration: ASTM E 783 at 1.5 times the rate specified for laboratory testing in "Performance Requirements" Article but not more than 0.09 cfm/sq. ft. (0.45 L/s per sq. m) at a static-air-pressure differential of 1.57 lbf/sq. ft. (75 Pa).
 - a. Perform a minimum of two tests in areas as directed by Architect.
 - b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to 70 percent completion.
 - 3. Water Penetration: ASTM E 1105 at a minimum uniform and cyclic static-air-pressure differential of 0.67 times the static-air-pressure differential specified for laboratory testing in "Performance Requirements" Article, but not less than 6.24 lbf/sq. ft. (300 Pa) and shall not evidence water penetration.
- C. Structural-Sealant Adhesion: Test structural sealant according to recommendations in ASTM C 1401, Destructive Test Method A, "Hand Pull Tab (Destructive)," Appendix X2.
 - 1. Test a minimum of two areas on each building facade.
 - 2. Repair installation areas damaged by testing.
- D. Aluminum-framed storefronts will be considered defective if they do not pass tests and inspections.
- E. Prepare test and inspection reports.

END OF SECTION 08 43 13

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SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY:

- A. Section Includes: Finish Hardware for door openings, except as otherwise specified herein.
 - 1. Door hardware for steel (hollow metal) doors.
 - 2. Keyed cylinders as indicated.
- B. Related Sections:
 - 1. Division 06: Rough Carpentry.
 - 2. Division 08: Hollow Metal Doors and Frames.
- C. References: Comply with applicable requirements of the following standards. Where these standards conflict with other specific requirements, the most restrictive shall govern.
 - 1. Builders Hardware Manufacturing Association (BHMA)
 - 2. NFPA 101 Life Safety Code, 2010
 - 3. NFPA 80 – Standard for Fire Doors and Other Opening Protectives, 2013
 - 4. ANSI-A156.xx- Various Performance Standards for Finish Hardware
 - 5. UL10C – Positive Pressure Fire Test of Door Assemblies
 - 6. ANSI-A117.1 – Accessible and Usable Buildings and Facilities 2009
 - 7. DHI /ANSI A115.IG – Installation Guide for Doors and Hardware
 - 8. Florida Building Code 2020, 7th Edition
- D. Intent of Hardware Groups
 - 1. Should items of hardware not definitely specified be required for completion of the Work, furnish such items of type and quality comparable to adjacent hardware and appropriate for service required.
 - 2. Where items of hardware are not definitely or correctly specified, but are required for completion of the Work, a written statement of such omission, error, or other discrepancy must be submitted to Architect prior to date specified for receipt of bids for clarification by addendum. Otherwise, furnish such items in the type and quality established by this specification, and appropriate to the service intended.
- E. Allowances (as required)
 - 1. Refer to Division 01 for allowance amount and procedures.
- F. Alternates

1. Refer to Division 01 for Alternates and procedures.

1.2 SUBSTITUTIONS:

A. Comply with Division 01.

1.3 SUBMITTALS:

A. Comply with Division 01.

B. Special Submittal Requirements: Combine submittals of this Section with Sections listed below to ensure the "design intent" of the system/assembly is understood and can be reviewed together.

C. Product Data: Manufacturer's specifications and technical data including the following:

1. Detailed specification of construction and fabrication.
2. Manufacturer's installation instructions.
3. Wiring diagrams for each electric product specified. Coordinate voltage with electrical before submitting.
4. Submit 6 copies of catalog cuts with hardware schedule.
5. Provide 9001-Quality Management and 14001-Environmental Management for products listed in Materials Section 2.2

D. Shop Drawings - Hardware Schedule: Submit 6 complete reproducible copy of detailed hardware schedule in a vertical format.

1. List groups and suffixes in proper sequence.
2. Completely describe door and list architectural door number.
3. Manufacturer, product name, and catalog number.
4. Function, type, and style.
5. Size and finish of each item.
6. Mounting heights.
7. Explanation of abbreviations and symbols used within schedule.
8. Detailed wiring diagrams, specially developed for each opening, indicating all electric hardware, security equipment and access control equipment, and door and frame rough-ins required for specific opening.

E. Templates: Submit templates and "reviewed Hardware Schedule" to door and frame supplier and others as applicable to enable proper and accurate sizing and locations of cutouts and reinforcing.

1. Templates, wiring diagrams and "reviewed Hardware Schedule" of electrical terms to electrical for coordination and verification of voltages and locations.

F. Samples: (If requested by the Architect)

1. 1 sample of Lever and Rose/Escutcheon design, (pair).
2. 3 samples of metal finishes

G. Contract Closeout Submittals: Comply with Division 01 including specific requirements indicated.

1. Operating and maintenance manuals: Submit 3 sets containing the following.
 - a. Complete information in care, maintenance, and adjustment, and data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Name, address, and phone number of local representatives for each manufacturer.
 - d. Parts list for each product.
2. Copy of final hardware schedule, edited to reflect, "As installed".
3. Copy of final keying schedule
4. As installed "Wiring Diagrams" for each piece of hardware connected to power, both low voltage and 110 volts.
5. One set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.

1.4 QUALITY ASSURANCE

A. Comply with Division 01.

1. Exterior Openings Severe Windstorm Components testing: Listed and labeled by a testing and inspecting agency acceptable to authority having jurisdiction, based on testing according to ANSI A250.13. Further compliance with Florida Building Codes for Hurricane (NOA) for Exterior Openings.
2. Statement of qualification for distributor and installers.
3. Statement of compliance with regulatory requirements and single source responsibility.
4. Distributor's Qualifications: Firm with 3 years of experience in the distribution of commercial hardware.
 - a. Distributor to employ full time Architectural Hardware Consultants (AHC) for the purpose of scheduling and coordinating hardware and establishing keying schedule.
 - b. Hardware Schedule shall be prepared and signed by an AHC.
5. Installer's Qualifications: Firm with 3 years of experience in installation of similar hardware to that required for this Project, including specific requirements indicated.
6. Regulatory Label Requirements: Provide testing agency label or stamp on hardware for labeled openings.
 - a. Provide UL listed hardware for labeled and 20-minute openings in conformance with requirements for class of opening scheduled.
 - b. Underwriters Laboratories requirements have precedence over this specification where conflict exists.
7. Single Source Responsibility: Except where specified in hardware schedule, furnish products of only one manufacturer for each type of hardware.

- B. Review Project for extent of finish hardware required to complete the Work. Where there is a conflict between these Specifications and the existing hardware, notify the Architect in writing and furnish hardware in compliance with the Specification unless otherwise directed in writing by the Architect.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Packing and Shipping: Comply with Division 01.
 - 1. Deliver products in original unopened packaging with legible manufacturer's identification.
 - 2. Package hardware to prevent damage during transit and storage.
 - 3. Mark hardware to correspond with "reviewed hardware schedule".
 - 4. Deliver hardware to door and frame manufacturer upon request.
- B. Storage and Protection: Comply with manufacturer's recommendations.

1.6 PROJECT CONDITIONS:

- A. Coordinate hardware with other work. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security, and similar requirements indicated, as necessary for the proper installation and function, regardless of omissions or conflicts in the information on the Contract Documents.
- B. Review Shop Drawings for doors and entrances to confirm that adequate provisions will be made for the proper installation of hardware.

1.7 WARRANTY:

- A. Refer to Conditions of the Contract
- B. Manufacturer's Warranty:
 - 1. Closers: Ten years
 - 2. Exit Devices: Thirty Years
 - 3. Locksets & Cylinders: Three years
 - 4. All other Hardware: Two years.

1.8 OWNER'S INSTRUCTION:

- A. Instruct Owner's personnel in operation and maintenance of hardware units.

1.9 MAINTENANCE:

- A. Extra Service Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply with Division 01 Closeout Submittals Section.
 - 1. Special Tools: Provide special wrenches and tools applicable to each different or special hardware component.

2. Maintenance Tools: Provide maintenance tools and accessories supplied by hardware component manufacturer.
 3. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage, and protection of extra service materials.
- B. Maintenance Service: Submit for Owner's consideration maintenance service agreement for electronic products installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

- A. The following manufacturers are approved subject to compliance with requirements of the Contract Documents. Approval of manufacturers other than those listed shall be in accordance with Division 01.

<u>Item:</u>	<u>Manufacturer:</u>	<u>Approved:</u>
Hinges		Best Bommer, McKinney
Continuous Hinges	Best	National Guard, ABH
Locksets	Best 45H, 9K Series	Campus Standard
Locksets (FEMA 361)	Securitech	Per Door Mfr.
Cylinders	Best 1E, 12E Series	Campus Standard
Exit Devices	Precision 2000 Series	Von Duprin 98 at Ext. Alum. Drs.
Only		
Exit Devices (FEMA 361)	Securitech	Per Door Mfr.
Closers	Best HD8000 Series	Dorma 8900, LCN4030
Push/Pull Plates	Trimco	Burns, Rockwood
Protection Plates	Trimco	Burns, Rockwood
Door Stops	Trimco	Burns, Rockwood
Flush Bolts	Trimco	ABH, Burns
Coordinator & Brackets	Trimco	ABH, Burns
Threshold & Gasketing	National Guard	Reese, K.N. Crowder

2.2 MATERIALS:

- A. Hinges: Shall be Five Knuckle Ball bearing hinges
1. Template screw hole locations
 2. Bearings are to be fully hardened.
 3. Bearing shell is to be consistent shape with barrel.
 4. Minimum of 2 permanently lubricated non-detachable bearings on standard weight hinge and 4 permanently lubricated bearing on heavy weight hinges.
 5. Equip with easily seated, non-rising pins.
 6. Non-removable pin screws shall be slotted stainless steel screws.
 7. Hinges shall be full polished, front, back and barrel.
 8. Hinge pin is to be fully plated.
 9. Bearing assembly is to be installed after plating.
 10. Sufficient size to allow 180-degree swing of door
 11. Furnish five knuckles with flush ball bearings

12. Provide hinge type as listed in schedule.
13. Furnish 3 hinges per leaf to 7-foot, 6-inch height. Add one for each additional 30 inches in height or fraction thereof.
14. Tested and approved by BHMA for all applicable ANSI Standards for type, size, function, and finish
15. UL10C listed for Fire rated doors.

B. Geared Continuous Hinges:

1. Tested and approved by BHMA for ANSI A156.26-1996 Grade 1
2. Anti-spinning through fastener
3. UL10C listed for 3-hour Fire rating
4. Provide FEMA-361 compliant hinges where shown in hardware sets as required for door and frame assembly.
5. Non-handed
6. Lifetime warranty
7. Provide Fire Pins for 3-hour fire ratings
8. Sufficient size to permit door to swing 180 degrees

C. Mortise Type Locks and Latches:

1. Tested and approved by BHMA for ANSI A156.13, Series 1000, Operational Grade 1, Extra-Heavy Duty, Security Grade 2 and be UL10C.
2. Provide FEMA-361 compliant hardware where shown in hardware sets.
3. Furnish UL or recognized independent laboratory certified mechanical operational testing to 4 million cycles minimum.
4. Provide 9001-Quality Management and 14001-Environmental Management.
5. Fit ANSI A115.1 door preparation
6. Functions and design as indicated in the hardware groups
7. Solid, one-piece, 3/4-inch (19mm) throw, anti-friction latchbolt made of self-lubricating stainless steel
8. Deadbolt functions shall have 1 inch (25mm) throw bolt made of hardened stainless steel
9. Latchbolt and Deadbolt are to extend into the case a minimum of 3/8 inch (9.5mm) when fully extended
10. Auxiliary deadlatch to be made of one-piece stainless steel, permanently lubricated
11. Provide sufficient curved strike lip to protect door trim
12. Lever handles must be of forged or cast brass, bronze or stainless-steel construction and conform to ANSI A117.1. Levers that contain a hollow cavity are not acceptable
13. Lock shall have self-aligning, thru-bolted trim
14. Levers to operate a roller bearing spindle hub mechanism
15. Mortise cylinders of lock shall have a concealed internal setscrew for securing the cylinder to the lockset. The internal setscrew will be accessible only by removing the core, with the control key, from the cylinder body.
16. Spindle to be designed to prevent forced entry from attacking of lever
17. Provide locksets with 7-pin removable and interchangeable core cylinders
18. Each lever to have independent spring mechanism controlling it
19. Core face must be the same finish as the lockset.

D. Cylindrical Type Locks and Latch sets:

1. Provide locksets tested and approved by BHMA/ANSI A156.2, Series 4000, Operational Grade 1, Extra-Heavy Duty.
2. Provide locksets listed by Underwriters Laboratories for use on fire rated single or double swinging doors.
3. Provide locksets that meet the design and operation of the cylindrical lock to meet the accessible requirements of ANSI A117.1 and ADA–Americans with Disabilities Act.
4. Provide locksets that meet Florida Building Code and Miami-Dade County Code:
 - a. 9/16” latch throw – Listed by Florida Building Code and Miami-Dade County at ± 75 PSF for single doors.
 - b. 3/4” latch throw – Listed by Florida Building Code and Miami Dade County at ± 80 PSF for single doors and ± 50 PSF for double doors.
5. Provide locksets made in a manufacturing facility to compliant with ISO 9001-Quality Management and ISO 14001-Environmental Management.
6. Provide locksets that meet or exceed 50 million cycle test verified by third party testing agency.
7. Provide locksets with the following mechanical features
 - a. Locksets outside locked lever must withstand minimum 1400 inch-pounds of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still operate lockset.
 - b. Locksets shall fit modified ANSI A115.2 door preparation.
 - c. 2-3/4 inch (70 mm) backset, standard.
 - d. 9/16 inch (14 mm) throw latchbolt.
 - e. Latch to have single piece tail-piece construction.
 - f. Chassis – Critical latch and chassis components to be brass or corrosion-treated steel.
 - g. Lock shall allow the lever handle to move 45 degrees from parallel to the horizontal plane without engaging the latchbolt assembly.
 - h. Hub, side plate, shrouded rose, locking pin to be a one-piece casting with a shrouded locking lug.
 - i. Locksets to have anti-rotational studs that are thru-bolted.
 - j. Provide sufficient curved strike lip to protect door trim at single doors. At pairs of doors, provide 7/8” Lip to Center Strike.
 - k. Each lever to have independent spring mechanism.
 - l. Lever springs to be contained in the main lock hub.
 - m. Outside lever sleeve to be seamless, of one-piece construction made of a hardened steel alloy.
 - n. Keyed lever to be removable only after core is removed, by authorized control key.
8. Locksets to have the capability of supporting manufacturers’ conventional core as well as large and small interchangeable cores.
9. Provide core face with the same finish as the lockset.
10. Provide functions and design as indicated in the hardware groups.

E. Exit Devices:

1. Exit devices to meet or exceed BHMA for ANSI 156.3, Grade 1.

2. Provide FEMA-361 compliant hardware where shown in hardware sets.
3. Exit devices to be tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
4. Exit devices chassis to be investment cast steel, zinc dichromate.
5. Exit devices to have stainless steel deadlocking 3/4" through latch bolt.
6. Exit devices to be equipped with sound dampening on touch bar.
7. Non-fire rated exit devices to have cylinder dogging.
8. Non-fire rated exit devices to have 1/4" minimum turn hex key dogging.
9. Touchpad to be "T" style constructed of architectural metal with matching metal end caps.
10. Touch bar assembly on wide style exit devices to have a 1/4" clearance to allow for vision frames.
11. All exposed exit device components to be of architectural metals and "true" architectural finishes.
12. Provide strikes as required by application.
13. Fire exit hardware to conform to UL10C and UBC 7-2. UL tested for Accident Hazard.
14. The strike is to be black powder coated finish.
15. Exit devices to have field reversible handing.
16. Provide heavy duty vandal resistant lever trim with heavy duty investment cast stainless steel components and extra strength shock absorbing overload springs. Lever shall not require resetting. Lever design to match locksets and latch sets.
17. Provide 9001-Quality Management and 14001-Environmental Management.
18. Vertical Latch Assemblies to have gravity operation, no springs.
19. Exit Device Intruder Function Visual Indicator is to be used in conjunction with the ANSI "10" Function, which allows the outside lever trim to be locked from the inside while the door remains closed. Rim cylinder on the exterior/trim side retracts the latch from the outside.
 - a. Indicator to be actuated by a rim cylinder equipped with a keyed core or thumb-turn.
 - b. Directional indicator feature shall have a large status indicator window with directional pointer embossed into the active case cover to indicate key turn direction to lock and unlock outside lever trim. Labels or stickers are not acceptable.
 - c. The status indicator window shall be integrated into the housing of the exit device and is to contain bright reflective material that may be seen in low light conditions.
 - d. Indicator window to be protected by impact resistant lens cover.
 - e. The action to lock down/unlock shall require a quarter turn (90°) of key or thumb turn.
 - 1) Locked status shall be indicated by a red indicator that will appear under the lens cover with an image of a locked padlock.
 - 2) Unlocked status shall be indicated by a green indicator that will appear under the lens of the cover with an image of an unlocked padlock.

F. Surface Door Closers

1. Rack and Pinion Aluminum Surface Closers (Heavy Duty)

- a. Provide Full Rack and Pinion type closer constructed of R14 High Silicon Aluminum Alloy, or equal, to exceed the ANSI/BHMA A156.4 Grade 1 requirements.
 - b. Provide closers tested and approved for UL10C for positive pressure; UL228 & CAN/ULC-S133.
 - c. Provide closers that conform to ANSI/ICC A117.1 and ADA requirements for barrier-free accessibility.
 - d. Closer shall be available with heavy-duty arms and knuckles/elbows
 - e. Closer shall have maximum 2-7/16-inch case projection with non-ferrous cover.
 - 1) Closer cover to be:
 - a) Plastic (default)
 - 2) Closer cover finish to be:
 - a) Painted
 - f. Provide closers with all-weather hydraulic fluid.
 - g. Provide closers with separate adjusting valves for closing and latching speeds, as well as advanced backcheck and delayed action.
 - h. Provide closers with Delayed Action and/or Advanced Backcheck, where noted in hardware sets.
 - i. Provide adapter plates, shim spacers and blade stop spacers as required by frame and door conditions.
 - j. Mount closers on non-public side of door and stair side of stair doors, unless otherwise noted in hardware sets.
 - k. Closers shall be non-handed and multi-sized as noted in hardware sets.
- G. Push Plates: Provide with four beveled edges ANSI J301, .050 thickness, size as indicated in hardware set. Furnish oval-head countersunk screws to match finish.
- H. Pulls with plates: Provide with four beveled edges ANSI J301, 0.050" thickness Plates with ANSI J401 Pull as listed in hardware set. Provide proper fasteners for door construction.
- I. Kickplates: Provide with four beveled edges ANSI J102, 0.050" thickness Plates, 10 inches high by width less 2 inches on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- J. Mop plates: Provide with four beveled edges ANSI J103, 0.050" thickness Plates, 6 inches high by width less 1 inch on single doors and 1 inch on pairs of doors. Furnish oval-head countersunk screws to match finish.
- K. Armor Plates: Provide ANSI J101 with four beveled edges, 0.050" thickness Plates, 36 inches high by width less 1 inch on single or pairs of doors. Furnish oval-head countersunk screws to match finish.
- 1. Provide cutouts for hardware as listed in the hardware sets.
 - 2. Provide Warnock Hersey labeled plates for 3-hour metal fire doors, where allowed by local authority.
- L. Door Bolts: Flush bolts for wood or metal doors.

1. Manual flush bolts, Certified ANSI/BHMA 156.16 at openings, where allowed local authority.
 2. Provide Dust Proof Strike, Certified ANSI/BHMA 156.16 at doors with flush bolts without thresholds.
- M. Seals: All seals shall be finished to match adjacent frame color. Seals shall be furnished as listed in schedule. Material shall be UL listed for labeled openings.
- N. Weatherstripping: Provide at head and jambs only those units where resilient or flexible seal strip is easily replaceable. Where bar-type weatherstrip is used with parallel arm mounted closers install weatherstrip first.
1. Weatherstrip shall be resilient seal of Neoprene, Silicone.
 2. UL10C Positive Pressure rated seal set when required.
- O. Door Bottoms/Sweeps: Surface mounted or concealed door bottom, where listed in the hardware sets.
1. Door seal shall be resilient seal of Nylon Brush, Silicone.
 2. UL10C Positive Pressure rated seal set when required.
- P. Thresholds: Thresholds shall be aluminum beveled type with maximum height of ½” for conformance with ADA requirements. Furnish as specified and per details. Provide fasteners and screws suitable for floor conditions.
- Q. Silencers: Furnish silencers on all interior frames, 3 for single doors, 2 for pairs. Omit where any type of seals are installed.
- 2.3 FINISH:
- A. Designations used in Schedule of Finish Hardware - 3.05, and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18 including coordination with traditional U.S. finishes shown by certain manufacturers for their products
 - B. Powder coat door closers to match other hardware, unless otherwise noted.
 - C. Aluminum items shall be finished to match predominant adjacent material. Seals to coordinate with frame color.
- 2.4 KEYS AND KEYING:
- A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.
 - B. Cylinders, removable and interchangeable core system: Best CORMAX™ Patented 7-pin.

- C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."
- D. Transmit Grand Master keys, Master keys and other Security keys to Owner by Registered Mail, return receipt requested.
- E. Furnish keys in the following quantities:
 - 1. 1 each Grand Master keys
 - 2. 4 each Master keys
 - 3. 2 each Change keys each keyed core
 - 4. 15 each Construction Master keys
 - 5. 1 each Control keys
- F. The Owner, or the Owner's agent, will install permanent cores and return the construction cores to the Hardware Supplier. Construction cores and keys remain the property of the Hardware Supplier.
- G. Keying Schedule: Arrange for a keying meeting, and programming meeting with Architect Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying and programming complies with project requirements. Furnish 3 typed copies of keying and programming schedule to Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verification of conditions: Examine doors, frames, related items and conditions under which Work is to be performed and identify conditions detrimental to proper and or timely completion.
 - 1. Do not proceed until unsatisfactory conditions have been corrected.

3.2 HARDWARE LOCATIONS:

- A. Mount hardware units at heights indicated in the following publications except as specifically indicated or required to comply with the governing regulations.
 - 1. Recommended Locations for Builder's Hardware for Standard Steel Doors and Frames, by the Door and Hardware Institute (DHI).
 - 2. Recommended locations for Architectural Hardware for flush wood doors (DHI).
 - 3. WDMA Industry Standard I.S.-1A-04, Industry Standard for Architectural wood flush doors.

3.3 INSTALLATION:

- A. Install each hardware item per manufacturer's instructions and recommendations. Do not install surface mounted items until finishes have been completed on the substrate. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- B. Conform to local governing agency security ordinance.
- C. Install Conforming to ICC/ANSI A117.1 Accessible and Usable Building and Facilities.
 - 1. Adjust door closer sweep periods so that from the open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches from the latch, measured to the landing side of the door.
- D. Installed hardware using the manufacturers fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.

3.4 FIELD QUALITY CONTROL AND FINAL ADJUSTMENT

- A. Contractor/Installers, Field Services: After installation is complete, contractor shall inspect the completed door openings on site to verify installation of hardware is complete and properly adjusted, in accordance with both the Contract Documents and final shop drawings.
 - 1. Check and adjust closers to ensure proper operation.
 - 2. Check latch set, lockset, and exit devices are properly installed and adjusted to ensure proper operation.
 - a. Verify levers are free from binding.
 - b. Ensure latch bolts and dead bolts are engaged into strike and hardware is functioning.
 - 3. Report findings, in writing, to architect indicating that all hardware is installed and functioning properly. Include recommendations outlining corrective actions for improperly functioning hardware if required.

3.5 SCHEDULE OF FINISH HARDWARE:

Manufacturer List

<u>Code</u>	<u>Name</u>
AB	ABH Manufacturing Inc.
BE	Best Access Systems
BY	By Related Section
DM	dormakaba
NA	National Guard Products
PR	Best (Precision)
RO	Rockwood
SECU	Securitech

ST Best
TR Trimco Hardware

Option List

<u>Code</u>	<u>Description</u>
3/4	3/4" THROW LATCH
36"	36" Door Width
3RO	Prefix option for 2000 Apex Series
7'0"	7'0" HIGH
B4E-HEAVY-AP	BEVELED 4 EDGES - ARMOR PLATES
B4E-HEAVY-KP	BEVELED 4 EDGES - KICK PLATES
BSHD	Blade Stop Spacer
C	Quick Connect Wiring System
C4	CAM-STANDARD CAM
CA-03	Cylinder Attachment Kit (Rim/SVR Device)
CD	CYLINDER DOGGING
CFC	CUT FOR CYLINDER
CSK	COUNTER SINKING OF KICK and MOP PLATES
CSK-AP	COUNTER SINKING OF ARMOUR PLATES
Cut to Length	Cut to Length (Specify)
DP80	DP80 Drop Plate
EPT Prep	EPT Prep (full mortise)
HC	Hurricane Code Device
LBR	LESS BOTTOM ROD
LD	Less Dogging
LM	LOST MOTION
MCS	Mullion Cap Spacer (600 Finish)
MLR	MOTORIZED LATCH RETRACTION
NFHD	Narrow Frame Bracket - Heavy Duty Arms
RQE	Request to Exit
School Option	School Option
SNB (2)	SEX BOLTS (2)
TDS	TOUCHBAR MONITORING DOUBLE SWITCH
VIB	Double Visual Indicator Option

Finish List

<u>Code</u>	<u>Description</u>
600	Primed for Painting
626	Satin Chromium Plated
630	Satin Stainless Steel
689	Aluminum Painted
AL	Aluminum
Silver	Silver
US26D	Chromium Plated, Dull
US32D	Stainless Steel, Dull

Hardware Sets

Set #01

Doors: 101

1	Continuous Hinge	661HD x LAR	AL	ST
1	Lockset	45H-7AB14H PATD WS	626	BE
1	Closer	HD8016 SDS	689	BE
1	Kick Plate	K0050 10" x 2" LDW B4E-HEAVY-KP CSK	630	TR
1	Gasketing (Head / Jambs)	127SA x LAR		NA
1	Door Sweep	C627A x LAR		NA
1	Drip Cap	16 A X 4" ODW		NA
1	Threshold	896S x LAR 1/4-20 SSMS/EA	AL	NA

Set #02

Doors: 101A

3	Butt Hinge	FBB168 4.5" x 4.5" NRP	26D	ST
1	Lockset	9K3-7AB14D PATD S3	626	BE
1	Closer	HD8016 FHP	689	BE
1	Wall Bumper	1270CVSV	626	TR
3	Silencer	1229A	GREY	TR

Set #03

Doors: 102

1	Continuous Hinge	661HD x LAR	AL	ST
1	Lockset	45H-7TA14H PATD WS	626	BE
1	Closer	HD8016 SDST	689	BE
1	Kick Plate	K0050 10" x 2" LDW B4E-HEAVY-KP CSK	630	TR
1	Gasketing (Head / Jambs)	127SA x LAR		NA
1	Door Sweep	C627A x LAR		NA
1	Drip Cap	16 A X 4" ODW		NA
1	Threshold	896S x LAR 1/4-20 SSMS/EA	AL	NA

Set #04

Doors: 103

1	Continuous Hinge	661HD x LAR	AL	ST
1	Exit Device (Intruder)	HC 2110VI X 4908D	630	PR
1	Mortise Cylinder	1E-74 PATD	626	BE
1	Rim Cylinder	12E-72 PATD	626	BE
1	Closer	HD8016 SDS	689	BE
1	Kick Plate	K0050 10" x 2" LDW B4E-HEAVY-KP CSK	630	TR
1	Gasketing (Head / Jambs)	127SA x LAR		NA
1	Door Sweep	C627A x LAR		NA
1	Drip Cap	16 A X 4" ODW		NA
1	Threshold	896S x LAR 1/4-20 SSMS/EA	AL	NA

Set #05

Doors: 106

2	Continuous Hinge	661HD x LAR	AL	ST
2	Extension Flush Bolt	556WS	US26D	RO
1	Lockset	45H-7TD14H PATD WS	626	BE
2	Closer	HD8016 SDST	689	BE
2	Kick Plate	K0050 10" x 2" LDW B4E-HEAVY-KP CSK	630	TR
1	Gasketing (Head / Jambs)	127SA x LAR		NA
2	Door Sweep	C627A x LAR		NA
1	Drip Cap	16 A X 4" ODW		NA
1	Saddle Threshold	425 HD x 1/4-20 SSMS/EA x LAR	AL	NA

Set #06

Doors: 107

1	Continuous Hinge	661HD x LAR	AL	ST
1	Lockset	45H-7TD14H PATD WS	626	BE
1	Closer	HD8016 SDS	689	BE
1	Kick Plate	K0050 10" x 2" LDW B4E-HEAVY-KP CSK	630	TR
1	Gasketing (Head / Jambs)	127SA x LAR		NA
1	Door Sweep	C627A x LAR		NA
1	Drip Cap	16 A X 4" ODW		NA
1	Threshold	896S x LAR 1/4-20 SSMS/EA	AL	NA

Set #07

Doors: 107A

3	Bull Hinge	FBB179 4.5" x 4.5" NRP	26D	ST
1	Lockset	9K3-7D14D PATD S3	626	BE
3	Silencer	1229A	GREY	TR

Opening List

<u>Opening</u>	<u>HW Set</u>
101	01
101A	02
102	03
103	04
106	05
107	06
107A	07

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 08 80 00 – GLAZING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Glass for windows and storefront framing.
2. Glazing sealants and accessories.

1.2 COORDINATION

- A. Coordinate glazing channel dimensions to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.

1.3 ACTION SUBMITTALS

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

- B. Glass Samples: For each type of glass product other than clear monolithic vision glass the following products, 12 inches (300 mm) square.

1. Tinted glass.
2. Coated glass.
3. Laminated glass.
4. Insulating glass.

- C. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs glass installers for this Project who are certified under the National Glass Association's Certified Glass Installer Program.

- B. Glass Testing Agency Qualifications: A qualified independent testing agency accredited according to the NFRC CAP 1 Certification Agency Program.

- C. Sealant Testing Agency Qualifications: An independent testing agency qualified according to ASTM C 1021 to conduct the testing indicated.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Protect glazing materials according to manufacturer's written instructions. Prevent damage to glass and glazing materials from condensation, temperature changes, direct exposure to sun, or other causes.

- B. Comply with insulating-glass manufacturer's written instructions for venting and sealing units to avoid hermetic seal ruptures due to altitude change.

1.6 FIELD CONDITIONS

- A. Environmental Limitations: Do not proceed with glazing when ambient and substrate temperature conditions are outside limits permitted by glazing material manufacturers and when glazing channel substrates are wet from rain, frost, condensation, or other causes.
 - 1. Do not install glazing sealants when ambient and substrate temperature conditions are outside limits permitted by sealant manufacturer or are below 40 deg F (4.4 deg C).

1.7 WARRANTY

- A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer agrees to replace coated-glass units that deteriorate within specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.
 - 1. Warranty Period: 10 years from date of Substantial Completion.
- B. Manufacturer's Special Warranty for Laminated Glass: Manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.
 - 1. Warranty Period: 10 years from date of Substantial Completion.
- C. Manufacturer's Special Warranty for Insulating Glass: Manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, but limited to:
 - 1. AGC Glass North America (Basis of Design)
 - 2. AFG Industries
 - 3. Guardian Industries Corp.

4. Pilkington North America
 5. PPG Industries, Inc.
- B. Source Limitations for Glass: Obtain from single source from single manufacturer for each glass type.
- C. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.

2.2 PERFORMANCE REQUIREMENTS

- A. General: Installed glazing systems shall withstand normal thermal movement and wind and impact loads (where applicable) without failure, including loss or glass breakage attributable to the following: defective manufacture, fabrication, or installation; failure of sealants or gaskets to remain watertight and airtight; deterioration of glazing materials; or other defects in construction.
- B. Structural Performance: Glazing shall withstand the following design loads within limits and under conditions indicated determined according to the IBC and ASTM E 1300.
1. Design Wind Pressures: As indicated on Structural Drawings.
 2. Design Wind Pressures: Determine design wind pressures applicable to Project according to ASCE/SEI 7, based on heights above grade indicated on Drawings.
 - a. Wind Design Data: As indicated on Drawings.
- C. Safety Glazing: Where safety glazing is indicated, provide glazing that complies with 16 CFR 1201, Category II.

2.3 GLASS PRODUCTS, GENERAL

- A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below unless more stringent requirements are indicated. See these publications for glazing terms not otherwise defined in this Section or in referenced standards.
1. GANA Publications: "Laminated Glazing Reference Manual" and "Glazing Manual."
- B. Safety Glazing Labeling: Where safety glazing is indicated, permanently mark glazing with certification label of the SGCC, the SGCC or another certification agency acceptable to authorities having jurisdiction or manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- C. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IGCC.
- D. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass that complies with performance requirements and is not less than the thickness indicated.

2.4 GLASS PRODUCTS

- A. Ultraclear Float Glass: ASTM C 1036, Type I, Class I (clear), Quality-Q3; and with visible light transmission of not less than 91 percent and solar heat gain coefficient of not less than 0.87.
- B. Fully Tempered Float Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- C. Heat-Strengthened Float Glass: ASTM C 1048, Kind HS (heat strengthened), Type I, Condition A (uncoated) unless otherwise indicated, Type I, Class 1 (clear) or Class 2 (tinted) as indicated, Quality-Q3.
 - 1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
- D. Clear Annealed Float Glass: ASTM C 1036, Type I, Class 1 (clear), Quality-Q3.

2.5 LAMINATED GLASS

- A. Laminated Glass: ASTM C 1172. Use materials that have a proven record of no tendency to bubble, discolor, or lose physical and mechanical properties after fabrication and installation.
 - 1. Construction: Laminate glass with interlayer as indicated in Glass Types to comply with interlayer manufacturer's written instructions.
 - 2. Interlayer Thickness: Provide thickness not less than that indicated and as needed to comply with requirements.
 - 3. Interlayer Color: Clear unless otherwise indicated. Provide manufacturer's full range of colors to choose from.
- B. Windborne-Debris-Impact-Resistant Laminated Glass: Comply with requirements specified above for laminated glass except laminate glass with the following to comply with interlayer manufacturer's written instructions:
 - 1. Polyvinyl butyral interlayer.

2.6 INSULATING GLASS

- A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190.
 - 1. Sealing System: Dual seal, with manufacturer's standard primary and secondary sealants.
 - 2. Perimeter Spacer: Manufacturer's standard spacer material and construction
 - 3. Desiccant: Molecular sieve or silica gel, or a blend of both.

2.7 GLAZING SEALANTS (As Needed)

A. General:

1. Compatibility: Compatible with one another and with other materials they contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
3. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the work include but are not limited to the following:
 - a. Dow Corning Corporation; 790
 - b. GE Advanced Materials – Silicones; SilPruf LM SCS2700
 - c. May National Associates, Inc., Bondaflex Sil 290
 - d. Pecora Corporation: 890
 - e. Sika Corporation, Construction Products Division; SikaSil.

2.8 GLAZING TAPES (As Needed)

A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; non-staining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:

1. AAMA 804.3 tape, where indicated.
2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

2.9 MISCELLANEOUS GLAZING MATERIALS

- A. General: Provide products of material, size, and shape complying with referenced glazing standard, with requirements of manufacturers of glass and other glazing materials for application indicated, and with a proven record of compatibility with surfaces contacted in installation.
- B. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.
- C. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
- D. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

- E. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).

2.10 FABRICATION OF GLAZING UNITS

- A. Fabricate glazing units in sizes required to fit openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with written instructions of product manufacturer and referenced glazing publications, to comply with system performance requirements.
- B. Clean-cut or flat-grind vertical edges of butt-glazed monolithic lites to produce square edges with slight chamfers at junctions of edges and faces.
- C. Grind smooth and polish exposed glass edges and corners.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine framing, glazing channels, and stops, with Installer present, for compliance with the following:
 - 1. Manufacturing and installation tolerances, including those for size, squareness, and offsets at corners.
 - 2. Presence and functioning of weep systems.
 - 3. Minimum required face and edge clearances.
 - 4. Effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings not firmly bonded to substrates.
- B. Examine glazing units to locate exterior and interior surfaces. Label or mark units as needed so that exterior and interior surfaces are readily identifiable. Do not use materials that leave visible marks in the completed Work.

3.3 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass includes glass with edge damage or other imperfections that, when installed, could weaken glass, impair performance, or impair appearance.
- C. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

- D. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- E. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- F. Provide spacers for glass lites where length plus width is larger than 50 inches (1270 mm).
 - 1. Locate spacers directly opposite each other on both inside and outside faces of glass. Install correct size and spacing to preserve required face clearances, unless gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and to comply with system performance requirements.
 - 2. Provide 1/8-inch (3-mm) minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.
- G. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.
- H. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.
- I. Set glass lites with proper orientation so that coatings face exterior or interior as specified.
- J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.
- K. Square cut wedge-shaped gaskets at corners and install gaskets in a manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.
- L. Adjust glazing channel dimensions as required by Project Conditions during installation to provide necessary bite on glass, minimum edge and face clearances and adequate sealant thickness with reasonable tolerances.

3.4 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first, then to jambs. Cover horizontal framing joints by applying tapes to jambs, then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Do not remove release paper from tape until right before each glazing unit is installed.
- F. Apply heel bead of elastomeric sealant.
- G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of

removable stops. Start gasket applications at corners and work toward centers of openings.

- H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.5 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- E. Install gaskets so they protrude past face of glazing stops.

3.6 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.7 LOCK-STRIP GASKET GLAZING

- A. Comply with ASTM C 716 and gasket manufacturer's written instructions. Provide supplementary wet seal and weep system unless otherwise indicated.

3.8 CLEANING AND PROTECTION

- A. Immediately after installation remove nonpermanent labels and clean surfaces.
- B. Protect glass from contact with contaminating substances resulting from construction operations. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains.

1. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer. Remove and replace glass that cannot be cleaned without damage to coatings.
- C. Remove and replace glass that is damaged during construction period.
- D. Wash glass on both exposed surfaces not more than four days before date scheduled for inspections that establish date of Substantial Completion. Wash glass as recommended in writing by glass manufacturer.

3.9 GLASS SCHEDULE

- A. Glass Type **IG-1:** Low-E-coated, tinted insulating glass-laminated.
 1. Overall Unit Thickness: 1-5/16-inch.
 2. Outdoor Lite: 1/4-inch Tempered glass.
 3. Interspace Content: Air/Argon.
 4. Indoor Lite: 9/16-inch laminated glass. Each ply 1/4-inch minimum with .090-inch thick PVB.
 5. Low-E Coating: Surface 2.
 6. Visible Light Transmittance: 35 percent minimum.
 7. Solar Transmittance: 18 percent.
 8. UV Transmittance: 7 percent.
 9. Reflectance – Out: 6 percent.
 10. Reflectance – In: 10 percent.
 11. Reflectance – Solar: 14 percent.
 12. Winter Nighttime U-Factor (Air/Argon): 0.29/0.25.
 13. Shading Coefficient: 0.29.
 14. Solar Heat Gain Coefficient: 0.25.
 15. Light to Solar Gain: 1.40.
 16. DW Index: 0.28.
 17. Safety glazing required.

END OF SECTION 08 80 00

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 09 11 10 - NON-LOAD-BEARING STEEL FRAMING (INTERIORS)

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes non-load-bearing steel framing members for the following applications:
 - 1. Interior framing systems (e.g., supports for partition walls, framed soffits, furring, etc.).
 - 2. Interior suspension systems (e.g., supports for ceilings, suspended soffits, etc.).

1.2 SUBMITTALS

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

1.3 QUALITY ASSURANCE

- A. Fire-Test-Response Characteristics: For fire-resistance-rated assemblies that incorporate non-load-bearing steel framing, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.

PART 2 - PRODUCTS

2.1 NON-LOAD-BEARING STEEL FRAMING, GENERAL

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
 - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.
 - 2. Protective Coating: corrosion resistance zinc coating, unless otherwise indicated.

2.2 SUSPENSION SYSTEM COMPONENTS

- A. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch-diameter wire, or double strand of 0.0475-inch-diameter wire.
- B. Hanger Attachments to Concrete:
 - 1. Anchors: Fabricated from corrosion-resistant materials with holes or loops for attaching wire hangers and capable of sustaining, without failure, a load equal to 5

times that imposed by construction as determined by testing according to ASTM E 488 by an independent testing agency.

- a. Type: Cast-in-place anchor, designed for attachment to concrete forms
Postinstalled, expansion anchor.
2. Powder-Actuated Fasteners: Suitable for application indicated, fabricated from corrosion-resistant materials with clips or other devices for attaching hangers of type indicated, and capable of sustaining, without failure, a load equal to 10 times that imposed by construction as determined by testing according to ASTM E 1190 by an independent testing agency.
- C. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.162-inch diameter.
- D. Carrying Channels: Cold-rolled, commercial-steel sheet with a base-metal thickness of 0.0538 inch and minimum 1/2-inch- wide flanges.
 1. Depth: 2 inches min.
- E. Furring Channels (Furring Members):
 1. Cold-Rolled Channels: 25 gauge with 20 gauge for high impact drywall bare-steel thickness, with minimum 1/2-inch- wide flanges, 3/4 inch deep.
 2. Steel Studs: ASTM C 645.
 - a. Minimum Base-Metal Thickness: 25 gauge with 20 gauge for high impact drywall.
 - b. Depth: Unless otherwise noted (5 5/8 at plumbing walls.)
 3. Hat-Shaped, Rigid Furring Channels: ASTM C 645, 7/8 inch deep.
 - a. Minimum Base Metal Thickness: 25 gauge.
 4. Resilient Furring Channels: 3/4 inch deep members designed to reduce sound transmission.
 - a. Configuration: Hat shaped.
- F. Grid Suspension System for Ceilings: ASTM C 645, direct-hung system composed of main beams and cross-furring members that interlock.
 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Armstrong World Industries, Inc.; Drywall Grid Systems.
 - b. Chicago Metallic Corporation; 640-C Drywall Furring System.
 - c. USG Corporation; Drywall Suspension System.

2.3 STEEL FRAMING FOR FRAMED ASSEMBLIES

- A. Steel Studs and Runners: ASTM C 645.
 - 1. Minimum Base-Metal Thickness: 25 gauge with 20 gauge for high impact drywall.
 - 2. Deflection Track: Steel sheet top runner manufactured to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; in thickness not less than indicated for studs and in width to accommodate depth of studs.
 - a. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - 1) Steel Network Inc. (The); VertiClip SLD or VertiTrack VTD Series.
 - 2) Superior Metal Trim; Superior Flex Track System (SFT).
- B. Cold-Rolled Channel Bridging: 0.0538-inch bare-steel thickness, with minimum 1/2-inch- wide flanges.
 - 1. Depth: 1-1/2 inches.
 - 2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches, 0.068-inch- thick, galvanized steel.

2.4 AUXILIARY MATERIALS (As needed)

- A. General: Provide auxiliary materials that comply with referenced installation standards.
 - 1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.
- B. Isolation Strip at Exterior Walls: Provide one of the following:
 - 1. Asphalt-Saturated Organic Felt: ASTM D 226, Type I (No. 15 asphalt felt), nonperforated.
 - 2. Foam Gasket: Adhesive-backed, closed-cell vinyl foam strips that allow fastener penetration without foam displacement, 1/8 inch thick, in width to suit steel stud size.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Suspended Assemblies: Coordinate installation of suspension systems with installation of overhead structure to ensure that inserts and other provisions for anchorages to building structure have been installed to receive hangers at spacing required to support the Work and that hangers will develop their full strength.
 - 1. Furnish concrete inserts and other devices indicated to other trades for installation in advance of time needed for coordination and construction.
- B. Coordination with Sprayed Fire-Resistive Materials:
 - 1. Before sprayed fire-resistive materials are applied, attach offset anchor plates or ceiling runners (tracks) to surfaces indicated to receive sprayed fire-resistive materials. Where offset anchor plates are required, provide continuous plates fastened to building structure not more than 24 inches o.c.
 - 2. After sprayed fire-resistive materials are applied, remove them only to extent necessary for installation of non-load-bearing steel framing. Do not reduce thickness of fire-resistive materials below that required for fire-resistance ratings indicated. Protect adjacent fire-resistive materials from damage.

3.3 INSTALLATION, GENERAL

- A. Installation Standard: ASTM C 754, except comply with framing sizes and spacing indicated.
 - 1. Gypsum Board Assemblies: Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Install bracing at terminations in assemblies.
- D. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.

3.4 INSTALLING SUSPENSION SYSTEMS

- A. Install suspension system components in sizes and spacings indicated on Drawings, but not less than those required by referenced installation standards for assembly types and other assembly components indicated.
- B. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.
- C. Suspend hangers from building structure as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.

- a. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
- 2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers required to support standard suspension system members, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
 - a. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced installation standards.
- 3. Wire Hangers: Secure by looping and wire tying, either directly to structures or to inserts, eye screws, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause hangers to deteriorate or otherwise fail.
- 4. Flat Hangers: Secure to structure, including intermediate framing members, by attaching to inserts, eye screws, or other devices and fasteners that are secure and appropriate for structure and hanger, and in a manner that will not cause hangers to deteriorate or otherwise fail.
- 5. Do not attach hangers to steel roof deck.
- 6. Do not attach hangers to permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
- 7. Do not attach hangers to rolled-in hanger tabs of composite steel floor deck.
- 8. Do not connect or suspend steel framing from ducts, pipes, or conduit.
- D. Fire-Resistance-Rated Assemblies: Wire tie furring channels to supports.
- E. Grid Suspension Systems: Attach perimeter wall track or angle where grid suspension systems meet vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.
- F. Installation Tolerances: Install suspension systems that are level to within 1/8 inch in 12 feet measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

3.5 INSTALLING FRAMED ASSEMBLIES

- A. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
- B. Install studs so flanges within framing system point in same direction.
 - 1. Space studs as follows:
 - a. Single-Layer Application: 16 inches o.c., unless otherwise indicated.
 - b. Multilayer Application: 16 inches o.c., unless otherwise indicated.
 - c. Tile backing panels: 16 inches o.c., unless otherwise indicated.
- C. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are

indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.

1. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.
 2. Door Openings: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.
 - a. Install two studs at each jamb, unless otherwise indicated.
 - b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly.
 - c. Extend jamb studs through suspended ceilings and attach to underside of overhead structure (if needed for forces opening / closing doors.)
 3. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
 4. Fire-Resistance-Rated Partitions: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.
 - a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.
 5. Sound-Rated Partitions: Install framing to comply with sound-rated assembly indicated.
 6. Curved Partitions:
 - a. Bend track to uniform curve and locate straight lengths so they are tangent to arcs.
 - b. Begin and end each arc with a stud, and space intermediate studs equally along arcs. On straight lengths of not less than 2 studs at ends of arcs, place studs 6 inches o.c.
- D. Direct Furring:
1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.
- E. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.
- F. Stud wall bridging (horizontal) any 25 ga studs 12' 0" or taller shall have horizontal bridging at half-way point of height.

END OF SECTION 09 11 10

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 09 25 00 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:

1. Interior gypsum board.

1.2 SUBMITTALS

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

1.3 QUALITY ASSURANCE

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

1.4 STORAGE AND HANDLING

- A. Store materials inside under cover and keep them dry and protected against damage from weather, condensation, direct sunlight, construction traffic, and other causes. Stack panels flat to prevent sagging.

1.5 PROJECT CONDITIONS

- A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
- B. Do not install interior products until installation areas are enclosed and conditioned.
- C. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
1. Indications that panels are wet, or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 PANELS, GENERAL

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

2.2 INTERIOR GYPSUM BOARD

- A. General: Complying with ASTM C 1396/C 1396M, as applicable to type of gypsum board indicated and whichever is more stringent.

- 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. American Gypsum Co.
- b. BPB America Inc.
- c. G-P Gypsum.
- d. National Gypsum Company.
- e. USG Corporation.

- B. Type X:

- 1. Thickness: 5/8 inch. As required for Fire Resistance Assembly.
- 2. Long Edges: Tapered and featured (rounded or beveled) for prefilling.

- C. Type C:

- 1. Thickness: 5/8 inch. As required for Fire Resistance Assembly.
- 2. Long Edges: Tapered and featured (rounded or beveled) for prefilling.
- 3.

- D. Ceiling Type: Manufactured to have more sag resistance than regular-type gypsum board.

- 1. Thickness: 5/8 inch
- 2. Long Edges: Tapered and featured (rounded or beveled) for prefilling.

- E. High impact – fiber reinforced Abuse-Resistant Type: Manufactured to produce greater resistance to surface indentation, through-penetration (impact resistance), and abrasion than standard, regular-type and Type X gypsum board, equal to U.S. Gypsum Dens Armor plus paperless.

- 1. Core: 5/8 inch regular type or 5/8 inch Type X where called for.
- 2. Long Edges: Tapered.

2.3 TRIM ACCESSORIES

- A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet
2. Shapes:
 - a. Cornerbead.
 - b. Bullnose bead.
 - c. LC-Bead: J-shaped; exposed long flange receives joint compound.
 - d. L-Bead: L-shaped; exposed long flange receives joint compound.
 - e. U-Bead: J-shaped; exposed short flange does not receive joint compound.
 - f. Expansion (control) joint.
 - g. Curved-Edge Cornerbead: With notched or flexible flanges.

2.4 JOINT TREATMENT MATERIALS

- A. General: Comply with ASTM C 475/C 475M.
- B. Joint Tape:
 1. Interior Gypsum Wallboard: Paper.
- C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
 1. Prefilling: At open joints, rounded or beveled panel edges, and damaged surface areas, use setting-type taping compound.
 2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use drying-type, all-purpose compound.
 - a. Use setting-type compound for installing paper-faced metal trim accessories.
 3. Fill Coat: For second coat, use drying-type, all-purpose compound.
 4. Finish Coat: For third coat, use drying-type, all-purpose compound.
 5. Skim Coat: For final coat of Level 5 finish, use drying-type, all-purpose compound.

2.5 AUXILIARY MATERIALS (as needed)

- A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
- B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
- C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch thick.
 2. For fastening cementitious backer units, use screws of type and size recommended by panel manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. Comply with ASTM C 840.
- B. Install ceiling panels across framing to minimize the number of abutting end joints and to avoid abutting end joints in central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- C. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.
- D. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
- E. Form control and expansion joints with space between edges of adjoining gypsum panels.
- F. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chases braced internally.
 - 1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
 - 2. Fit gypsum panels around ducts, pipes, and conduits.
 - 3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch- wide joints to install sealant.
- G. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations, and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
- H. Attachment to Steel Framing: Attach panels so leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.

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

3.3 APPLYING INTERIOR GYPSUM BOARD

- A. Install interior gypsum board in the following locations:

1. Regular Type: Vertical or horizontal surfaces, unless otherwise indicated.
2. Type X: Where required for fire-resistance-rated assembly.
3. Ceiling Type: Ceiling surfaces.
4. High-Impact Type: Where Indicated.

- B. Single-Layer Application:

1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing, unless otherwise indicated.
2. On partitions/walls, apply gypsum panels vertically (parallel to framing) or horizontally (perpendicular to framing), unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
 - a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
 - b. At stairwells and other high walls, install panels horizontally, unless otherwise indicated or required by fire-resistance-rated assembly.
3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

- C. Multilayer Application:

1. On ceilings, apply gypsum board indicated for base layers before applying base layers on walls/partitions; apply face layers in same sequence. Apply base layers at right angles to framing members and offset face-layer joints 1 framing member, 16 inches minimum, from parallel base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly.
2. On partitions/walls, apply gypsum board indicated for base layers and face layers vertically (parallel to framing) with joints of base layers located over stud or furring member and face-layer joints offset at least one stud or furring member with base-layer joints, unless otherwise indicated or required by fire-resistance-rated assembly. Stagger joints on opposite sides of partitions.
3. On Z-furring members, apply base layer vertically (parallel to framing) and face layer either vertically (parallel to framing) or horizontally (perpendicular to framing) with vertical joints offset at least one furring member. Locate edge joints of base layer over furring members.

4. Fastening Methods: Fasten base layers and face layers separately to supports with screws

D. Laminating to Substrate: Where gypsum panels are indicated as directly adhered to a substrate (other than studs, joists, furring members, or base layer of gypsum board), comply with gypsum board manufacturer's written recommendations and temporarily brace or fasten gypsum panels until fastening adhesive has set.

3.4 INSTALLING TRIM ACCESSORIES

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

B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.

C. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners.
2. Bullnose Bead: Use at outside corners.
3. LC-Bead: Use at exposed panel edges.
4. L-Bead: Use (where needed).
5. U-Bead: Use at exposed panel edges.
6. Control joint (See 3.7)

3.5 FINISHING GYPSUM BOARD

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

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

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

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 4 finish:
 - a. Primer and its application to surfaces are specified in other Division 9 Sections.

3.6 PROTECTION

- A. Protect installed products from damage from weather, condensation, direct sunlight, construction, and other causes during remainder of the construction period.
- B. Remove and replace panels that are wet, moisture damaged, and mold damaged.
 - 1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
 - 2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

3.7 CRACK CONTROL

- a. Space control joints not more than 40' o.c. ceilings.
- b. Space control joints where ceiling framing and furring changes direction.
- c. Space control joints in wall no more than 30'-0" o.c.

END OF SECTION 09 25 00

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**BAY DISTRICT SCHOOLS
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SECTION 09 51 00 - ACOUSTICAL CEILINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.02 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2020.
- B. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings 2017.
- C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels 2019.
- D. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions 2022.
- E. ASTM E1264 - Standard Classification for Acoustical Ceiling Products 2022.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Do not install acoustical units until after interior wet work is dry.

1.04 SUBMITTALS

- A. Product Data: Provide data on suspension system components and acoustical units.
- B. Samples: Submit two samples 6 inch by 6 inch in size illustrating material and finish of acoustical units.
- C. Samples: Submit two samples each, 6 inches long, of suspension system main runner, cross runner, and perimeter molding.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- E. Manufacturer's qualification statement.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. Extra Acoustical Units: Quantity equal to 5 percent of total installed.

1.05 QUALITY ASSURANCE

- A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.

1.06 FIELD CONDITIONS

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

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acoustic Tiles/Panels:
 - 1. Armstrong World Industries, Inc: www.armstrongceilings.com/#sle.
 - 2. CertainTeed Corporation: www.certainteed.com/#sle.
 - 3. USG Corporation: www.usg.com/ceilings/#sle.
- B. Suspension Systems:
 - 1. Same as for acoustical units.

2.02 ACOUSTICAL UNITS

- A. Acoustical Panels: Painted mineral fiber, with the following characteristics:
 - 1. Classification: ASTM E1264 Type III.
 - a. Form: 2, water felted.
 - b. Pattern: "D" - fissured.
 - 2. Size: 24 by 24 inches.
 - 3. Light Reflectance: 82 percent, determined in accordance with ASTM E1264.
 - 4. NRC Range: minimum .75, determined in accordance with ASTM E1264.
 - 5. Panel Edge: Square.
 - 6. Color: White.
 - 7. Suspension System: Exposed grid.
 - 8. Products:
 - a. Armstrong World Industries, Inc. (Basis of Design); Fine Fissured: www.armstrongceilings.com/#sle.
 - b. USG Corporation: www.usg.com/ceilings/#sle.
 - c. CertainTeed Corporation: www.certainteed.com/#sle.

2.03 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.
 - 1. Materials:
 - a. Steel Grid: ASTM A653/A653M, G30 coating, unless otherwise indicated.
- B. Exposed Suspension System: Hot-dipped galvanized steel grid with aluminum cap.

1. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
2. Profile: Tee; 15/16 inch face width.
3. Finish: Baked enamel.
4. Color: White.

2.04 ACCESSORIES

- A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.
- B. Hanger Wire: 12 gauge, 0.08 inch galvanized steel wire.
- C. Perimeter Moldings: Same metal and finish as grid.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.02 PREPARATION

- A. Install after major above-ceiling work is complete.
- B. Coordinate the location of hangers with other work.

3.03 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Lay out system to a balanced grid design with edge units no less than 25 percent of acoustical unit size.
- D. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 1. Use longest practical lengths.
- E. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- G. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- H. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.
- I. Do not eccentrically load system or induce rotation of runners.

3.04 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.

- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- E. Cutting Acoustical Units:
 - 1. Make field cut edges of same profile as factory edges.
- F. Where round obstructions occur, provide preformed closures to match perimeter molding.

3.05 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION 09 51 00

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SECTION 09 60 00 – RESINOUS FLOORING

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes the following:
 - 1. Seamless epoxy flooring system, 1/8 inch thick, 100% solids epoxy, for Shower floors. See plans for locations.
 - 2. Seamless resinous epoxy coating system, 1/8 inch thick, 100% solids epoxy, Shower walls. See plans for locations.
 - 3. Floor Preparation and Protection.

1.2 RELATED SECTIONS

- A. Related sections include the following:
 - 1. Division 7 – Joint Sealants

1.3 SUBMITTALS

- A. System Data:
 - 1. Submit manufacturer’s specifications on cured system and individual components of the epoxy and urethane mortar systems, including physical properties and performance properties and tests, and submit Safety Data Sheets.
 - 2. Each individual component of the systems will be evaluated based on these standards.
 - 3. Manufacturer’s standard color charts, for each system type.
- B. Samples:
 - 1. The contractor shall submit a 6” x 6” cured system samples of both types of resinous flooring systems, applied to a rigid backing which the contractor has made for verification purposed and finish texture approval.

1.4 QUALITY ASSURANCE

- A. Manufacturer’s Qualifications:
 - 1. Obtain the resinous flooring systems materials from a single manufacturer with a minimum of five (5) years verifiable experience providing materials in the type specified in this section.
- B. Contractor’s Qualifications:
 - 1. Installation must be performed by a manufacturer certified contractor with

skilled mechanics not having less than three (3) years satisfactory experience in the installation of the type of systems as specified in this section and must be certified in writing by the manufacturer of the specified resinous flooring systems.

1.5 FIRE RATINGS

- A. Flooring shall be “self-extinguishing” when tested in accordance with ASTM-D-635-72, and shall have “extent of burning” not to exceed 0.25 inch per minute when tested in accordance with the same standard.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Primary flooring system materials shall be delivered in the manufacturer’s undamaged, unopened containers. Each container shall be clearly marked with the following:
 - 1. Product names and/or numbers
 - 2. Manufacturer’s name
 - 3. Component designation (A, B, etc.)
 - 4. Product Mix Ratio
 - 5. Health and Safety Information
 - 6. Infotrac Emergency Response Information
- B. Provide equipment and personnel to handle the materials by methods which prevent damage.
- C. The contractor shall promptly inspect direct jobsite material deliveries to assure that quantities are correct, comply with requirements and are not damaged.
- D. The contractor shall be responsible for materials furnished by him, and shall replace, at his own expense, such materials that are found to be defective in manufacturer or that have become damaged in transit, handling, or storage.
- E. Store materials in accordance with manufacturer’s instructions, with seals and labels intact and legible. Maintain temperatures within the required range. Do not use materials that exceed the manufacturer’s maximum recommended shelf life.

1.7 PROJECT CONDITIONS

- A. The contractor should visit the jobsite prior to beginning the installation of the resinous flooring systems to evaluate substrate condition, including substrate moisture content, and the extent of repairs required, if any. Concrete substrates shall be tested to verify that the moisture content of the substrate does not exceed the resinous flooring systems’ manufacturer’s recommendations.
- B. The contractor should exercise care during surface preparation and systems installation to protect surrounding substrates and surfaces, as well as in-place equipment. The contractor shall prepare the substrate to remove laitance and open

the surface. This shall be achieved by brush grit blasting (depending on the hardness of the concrete). Surface profile achieved shall be similar to medium grit sandpaper and free from bond-inhibiting contaminants. Costs incurred that are associated with damage from negligence or inadequate protection shall be the sole responsibility of the contractor.

- C. Each drain in the installation area must be working and raised or lowered to the actual finished elevation of the resinous flooring systems.
- D. Systems must be protected by the General Contractor, or as a separate bid item, by the installing contractor until it is inspected and turned over to the owner.
- E. The minimum slab temperature must be conditioned to 50 -70 degrees F before commencing installation, during installation, and for at least 72 hours after installation is complete. The slab temperature must be at least 5degrees F above the dew point during installation.
- F. Maintain lighting at a minimum uniform level of 50 or more foot-candles in areas where the resinous flooring systems are being installed. Permanent lighting shall be in place and working during the installation. If permanent lighting is not in place, simulate permanent lighting conditions during the resinous flooring installation.
- G. Leaks from pipes and other sources must be corrected prior to the installation of the resinous flooring systems.
- H. Perform Relative Humidity test, ASTM F 2170. Proceed with installation of resinous flooring systems only after substrates have a maximum of 75% RH.

1.8 WARRANTY

- A. The contractor and the manufacturer shall furnish a standard guarantee of the resinous flooring systems for a period for 3 years after installation. The labor and material guarantee shall include loss of bond and wear-through to the concrete substrate from normal use.
- B. Not included in the warranty are damage due to structural design deficiencies including, but not limited to, slabs cracking from lateral, vertical or rotational movement, and gouging or other damage due to forklifts, other equipment, delamination caused by vapor transmission, Acts of God, or other elements beyond the scope of protection of these systems nor causes not related to the systems materials. In case of a warranty claim, the owner will notify the manufacturer and contractor in writing within 30 days of the first appearance of problems covered under this warranty. The owner will provide free and unencumbered access to the area during normal working hours for warranty rework. Property protection is also the owner's responsibility. Remedy is limited to direct repair of the resinous flooring systems.

PART 2 – PRODUCTS

2.1 MANUFACTURER INFORMATION

- A. Subject to compliance with requirements, Manufacturers with products that may be incorporated into the Work include, but are not limited to the following:
1. Plexi-Chemie Inc. (Basis of Design)
 2. Dur-a-Flex
 3. Dura-Cote
 4. Stonhard
 5. Laticrete

2.2 FLOORING SYSTEM INFORMATION

- A. Resinous flooring system : Plexi*Quartz* 1/8 inch thick Decorative Slurry/Broadcast Epoxy Flooring System.
1. System Breakdown:
 - a. Primer coat: Plexi*Glaze* #4 100% solids water clear epoxy coating
 - b. Broadcast Quartz Aggregate: Plexi*Quartz*
 - c. Body coat: Plexi*Glaze* #4 100% solids water clear epoxy coating
 - d. Broadcast Quartz Aggregate: Plexi*Quartz*
 - e. Lock coat: Plexi*Glaze* #4 100% solids water clear epoxy coating
 - f. Topcoat: Plexi*Crest* P polyester urethane
 2. Patching/Caulking: use Plexi*Flex*Caulk or Plexi*Patch* QC.
- B. Resinous epoxy coating system : Plexi*Quartz* 1/8 inch thick Decorative Slurry/Broadcast Epoxy wall covering System.
3. System Breakdown:
 - g. Primer coat: Plexi*Glaze* #4 100% solids water clear epoxy coating
 - h. Broadcast Quartz Aggregate: Plexi*Quartz*
 - i. Body coat: Plexi*Glaze* #4 100% solids water clear epoxy coating
 - j. Broadcast Quartz Aggregate: Plexi*Quartz*
 - k. Lock coat: Plexi*Glaze* #4 100% solids water clear epoxy coating
 - l. Topcoat: Plexi*Crest* P polyester urethane
 4. Patching/Caulking: use Plexi*Flex*Caulk or Plexi*Patch* QC.

2.3 FLOORING SYSTEMS PROPERTIES

Typical physical properties at 70 degrees F (unless otherwise noted):

- A. Resinous Flooring System:
1. Tensile Strength (ASTM C-307): 2600 psi
 2. Tensile Strength (ASTM D-638): 4000 psi
 3. Compressive Strength (ASTM C-579): 14,500 psi
(ASTM D-695): 17,500 psi
 4. Resistance to Elevated Temperatures (MIL-D-3134): No slip or flow at

5.	Bond Strength, minimum (ASTM D-4541):	Required temperature range 155-165 deg.F > 400 psi
6.	Impact Resistance (ASTM D-2794):	> 160 in. lbs. No chipping, cracking or Delaminating; not more than 1/16 of an inch permanent indentation
7.	Hardness (Resin) (ASTM D-2240, Shore D):	80 – 90
8.	Hardness (Aggregate) (MOH's Mineral Scale):	6.5 – 7.0
9.	Abrasion Resistance (ASTM D-4060): Taber Abrader C17, 1000 gr. load, 1000 cycles	< 0.003 gr
10.	Coefficient of Friction (ASTM D-2047):	Standard: 0.6 Ramp/Incline: 0.8
11.	Water Absorption, max. (ASTM D-580):	Standard: 0.9 Smooth: 0.7
12.	Flammability (ASTM D-635):	Self-extinguishing bond to concrete
13.	Flexural Strength (ASTM C-580): (ASTM D-790):	4500 psi 10,000 psi
14.	Antimicrobial Resistance (ASTM G-21):	Passes
15.	Adhesion (ACI 503R):	> 400 psi 100% concrete failure
16.	VOC Content (40 CFR 59, Subpart D):	VOC = 0 g.L
 B. Resinous Epoxy Coating System:		
17.	Tensile Strength (ASTM C-307):	2600 psi
18.	Tensile Strength (ASTM D-638):	4000 psi
19.	Compressive Strength (ASTM C-579): (ASTM D-695):	14,500 psi 17,500 psi
20.	Resistance to Elevated Temperatures (MIL-D-3134):	No slip or flow at Required temperature range 155-165 deg.F
21.	Bond Strength, minimum (ASTM D-4541):	> 400 psi
22.	Impact Resistance (ASTM D-2794):	> 160 in. lbs. No chipping, cracking or Delaminating; not more than 1/16 of an inch permanent indentation
23.	Hardness (Resin) (ASTM D-2240, Shore D):	80 – 90
24.	Hardness (Aggregate) (MOH's Mineral Scale):	6.5 – 7.0
25.	Abrasion Resistance (ASTM D-4060): Taber Abrader C17, 1000 gr. load, 1000 cycles	< 0.003 gr
26.	Coefficient of Friction (ASTM D-2047):	Standard: 0.6 Ramp/Incline: 0.8
27.	Water Absorption, max. (ASTM D-580):	Standard: 0.9

28.	Flammability (ASTM D-635):	Smooth: 0.7 Self-extinguishing bond to concrete masonry units
29.	Flexural Strength (ASTM C-580): (ASTM D-790):	4500 psi 10,000 psi
30.	Antimicrobial Resistance (ASTM G-21):	Passes
31.	Adhesion (ACI 503R):	> 400 psi 100% concrete failure
32.	VOC Content (40 CFR 59, Subpart D):	VOC = 0 g.L

PART 3 – EXECUTION

3.1 PREPARATION

A. Surface Preparation for Resinous Flooring System – 1 (RFL-1):

1. Surfaces receiving the epoxy flooring system should perform proper surface preparation and cleaning procedures before installing the epoxy flooring system. Substrate should be clean, ous and dry before application.
2. Surfaces receiving the epoxy flooring system should be shot-blasted and/or diamond ground.
3. Substrate should be free of oil, grease, curing compounds, dust particles and dirt.
4. Do not apply to slabs on grade unless a heavy un-ruptured vapor barrier has been installed under the slab. Do not thin materials.

B. Surface Preparation for Resinous Flooring System – 2 (RFL-2):

1. Prepare concrete by mechanical means only. Shot blast, scarify, diamond grinding and the required preparation methods. No other preparation method is acceptable for the long-term success of any floor. Substrate must be free of all contamination or bond breaking substances including but not limited to dust, latency, curing compounds, coatings, sealers, oil, or grease. All spalled or deteriorated concrete should be removed by chipping hammers then patched with an epoxy patching material such as Plexi-Chemie’s *PlexiPatch QC*.

3.2 SYSTEM APPLICATION

A. Resinous Flooring System:

1. Apply each component of the 1/8” Decorative Slurry/Broadcast epoxy flooring system in compliance with manufacturer’s written instructions and strictly adhere to mixing and installation methods, recoat windows, cure times and environmental restrictions. The epoxy flooring system is to be installed directly over non-moving control joints and cracks which have been treated with semi-rigid *PlexiFlex* Epoxy Caulk or *PlexiPatch QC* and the epoxy flooring system will terminate at the edge of isolation and expansion joints as designated by the Architect, Engineer, or design Professional. Integral cove base shall be installed 6” high.
2. Installation Instructions:

- a. Prepare substrate properly in accordance with instructions above.
- b. Repair and fill all cracks, control joints, bug holes, bird baths and any surface deviations with either *PlexiFlex* Caulk or *PlexiPatch* QC.
- c. Install integral cove base.
- d. Apply a primer coat of *PlexiGlaze* #4.
- e. Broadcast *PlexiQuartz* aggregate, by hand or by mechanical flower, into the wet receiving coat of epoxy, making sure the entire floor is covered to saturation with aggregate (dray appearance).
- f. Allow curing, usually overnight, and thoroughly vacuum off the excess aggregate.
- g. Apply *PlexiGlaxe* #4 grout coat by squeegee with light backroll with tight nap roller. Allow to cure 8 – 10 hours.
- h. Apply clear polyurethane finish. Additional finish coats may be applied depending upon smoothness of surface desired.
- i. Provide Type “L” Zinc divider strip at top of integral cove base.

B. Resinous Epoxy Coating System:

3. Apply each component of the 1/8” Decorative Slurry/Broadcast epoxy flooring system in compliance with manufacturer’s written instructions and strictly adhere to mixing and installation methods, recoat windows, cure times and environmental restrictions. The epoxy flooring system is to be installed directly over non-moving control joints and cracks which have been treated with semi-rigid *PlexiFlex* Epoxy Caulk or *PlexiPatch* QC and the epoxy flooring system will terminate at the edge of isolation and expansion joints as designated by the Architect, Engineer, or design Professional. Integral cove base shall be installed 6” high.
4. Installation Instructions:
 - j. Prepare substrate properly in accordance with instructions above.
 - k. Repair and fill all cracks, control joints, bug holes, bird baths and any surface deviations with either *PlexiFlex* Caulk or *PlexiPatch* QC.
 - l. Install integral cove base.
 - m. Apply a primer coat of *PlexiGlaze* #4.
 - n. Broadcast *PlexiQuartz* aggregate, by hand or by mechanical flower, into the wet receiving coat of epoxy, making sure the entire floor is covered to saturation with aggregate (dray appearance).
 - o. Allow curing, usually overnight, and thoroughly vacuum off the excess aggregate.
 - p. Apply *PlexiGlaxe* #4 grout coat by squeegee with light backroll with tight nap roller. Allow to cure 8 – 10 hours.
 - q. Apply clear polyurethane finish. Additional finish coats may be applied depending upon smoothness of surface desired.
 - r. Provide Type “L” Zinc divider strip at top of integral cove base.

3.3 CURING, CLEANING AND PROTECTION

- A. Cure the resinous flooring system materials in compliance with manufacturer’s directions, taking care to prevent contamination during stages of the installation and prior to completion of the curing process.

- B. Protect the resinous flooring systems from damage and wear during other phases of the construction operation, using temporary coverings as recommended by the manufacturer, if required. Remove temporary covering just prior to final inspection.
- C. Clean the resinous flooring systems just prior to final inspection, using materials and procedures suitable to the systems manufacturer.
- D. Some cleaners will affect the color, gloss, or texture of a resinous floor surface. To determine how a cleaner will perform, Plexi-Chemie recommends that you first test each cleaner, in a small area, utilizing your cleaning technique. This precaution will demonstrate the effect of your cleaner and technique. If no deleterious effects are observed, continue with the procedure. If deleterious effects do occur, modify the cleaning material and/or procedure. For recommendations regarding the types of cleaners, contact Plexi-Chemie, Inc.

END OF SECTION 09 60 00

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SECTION 09 65 00 - RESILIENT BASE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Resilient base.
- B. Installation accessories.

1.02 REFERENCE STANDARDS

- A. ASTM F1861 - Standard Specification for Resilient Wall Base 2021.

1.03 SUBMITTALS

- A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- B. Shop Drawings: Indicate seaming plans and floor patterns.
- C. Manufacturer's Qualification Statement.
- D. Installer's Qualification Statement.
- E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.
- F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. Extra Wall Base: 10 linear feet for every 500 linear feet or fraction thereof, of each type and color installed.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years documented experience.
- B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.
- B. Store all materials off of the floor in an acclimatized, weather-tight space.
- C. Maintain temperature in storage area between 55 degrees F and 90 degrees F.
- D. Do not double stack pallets.

1.06 FIELD CONDITIONS

- A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F.

PART 2 PRODUCTS

2.01 RESILIENT BASE

- A. Resilient Base: ASTM F1861, Type TV, vinyl, thermoplastic; Style B, Cove.
 - 1. Manufacturers:
 - a. Burke Flooring: www.burkeflooring.com/#sle.
 - b. Johnsonite, a Tarkett Company: www.johnsonite.com/#sle
 - c. Roppe Corporation: www.roppe.com/#sle
 - 2. Height: 4 inch.
 - 3. Thickness: 0.125 inch.
 - 4. Finish: Satin.
 - 5. Length: Roll.
 - 6. Color: To be selected by Architect from manufacturer's full range.
 - 7. Accessories: Premolded external corners and internal corners.

2.02 ACCESSORIES

- A. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
- B. Moldings, Transition and Edge Strips: Vinyl.
 - 1. Manufacturers:
 - a. Burke Flooring: www.burkeflooring.com/#sle.
 - b. Johnsonite, a Tarkett Company: www.johnsonite.com/#sle
 - c. Roppe Corporation: www.roppe.com/#sle.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are flat to tolerances acceptable to manufacturer, free of cracks that might telegraph through.

3.02 PREPARATION

- A. Clean substrate.

3.03 INSTALLATION - GENERAL

- A. Starting installation constitutes acceptance of conditions.
- B. Install in accordance with manufacturer's written instructions.

3.04 INSTALLATION - RESILIENT BASE

- A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches between joints.
- B. Install base on solid backing. Bond tightly to wall and floor surfaces.

3.05 CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage.
Clean in accordance with manufacturer's written instructions.

END OF SECTION 09 65 00

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SECTION 09 91 13 - EXTERIOR PAINTING (FOR PATCHING AND TOUCH-UP OF EXISTING BUILDINGS)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following exterior substrates:
 - 1. Concrete.
 - 2. Galvanized metal (Hollow Metal).
 - 3. Trim fabrications.
- B. Related Sections include the following:
 - 1. Division 5 Sections for shop priming of metal substrates with primers specified in this Section.
 - 2. Division 9 Section "Interior Painting" for surface preparation and the application of paint systems on interior substrates.
 - 3. Division 9 Painting Sections for special use coatings

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of topcoat product indicated.
- C. Samples for Verification: For each type of paint system and each color and gloss of topcoat indicated.
 - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
 - 2. Step coats on Samples to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- D. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.

2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

1.4 QUALITY ASSURANCE

A. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

B. Mockups: Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
2. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

1.5 DELIVERY, STORAGE, AND HANDLING

- ##### A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

- ##### A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- ##### B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1.7 EXTRA MATERIALS

- ##### A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.

1. Quantity: Furnish an additional [5] percent, but not less than [1 gal. (3.8 L)] of each material and color applied.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

1. Benjamin Moore & Co.
2. Benjamin Moore & Co., Limited (Canada).
3. California Paints.
4. Duron, Inc.
5. ICI Paints.
6. Porter Paints.
7. PPG Architectural Finishes, Inc.
8. Sherwin-Williams Company (The).

2.2 PAINT, GENERAL

- A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

- B. Colors: As selected by Architect from manufacturer's full range..

2.3 PRIMERS/SEALERS

- A. Alkali-Resistant Primer: MPI #3.

1. VOC Content: E Range of E1, E2, or E3.

- B. Bonding Primer (Water Based): MPI #17.

1. VOC Content: E Range of E1, E2, or E3.

- C. Bonding Primer (Solvent Based): MPI #69.

1. VOC Content: E Range of E1, E2, or E3.

2.4 METAL PRIMERS

- A. Alkyd Anticorrosive Metal Primer: MPI #79.

1. VOC Content: E Range of E1 or E2.

B. Quick-Drying Alkyd Metal Primer: MPI #76.

1. VOC Content: E Range of E1 or E2.

2.5 EXTERIOR LATEX PAINTS

A. Exterior Latex (Flat): MPI #10 (Gloss Level 1).

1. VOC Content: E Range of E1, E2, or E3.

B. Exterior Latex (Semigloss): MPI #11 (Gloss Level 5).

1. VOC Content: E Range of E1, E2, or E3.

2.6 EXTERIOR ALKYD PAINTS

A. Exterior Alkyd Enamel (Semigloss): MPI #94 (Gloss Level 5).

1. VOC Content: E Range of E1 or E2.

2. VOC Content: E Range of E1 or E2.

2.7 QUICK-DRYING ENAMELS

A. Quick-Drying Enamel (Semigloss): MPI #81 (Gloss Level 5).

1. VOC Content: E Range of E1, E2, or E3.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.

2. Wood: 15 percent.

C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.

1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
 - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Galvanized-Metal Substrates: Hollow metal remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

3.4 FIELD QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when paints are being applied:
1. Owner will engage the services of a qualified testing agency to sample paint materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
 2. Testing agency will perform tests for compliance of paint materials with product requirements.
 3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying-paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

- A. Concrete Substrates, Nontraffic Surfaces:
1. Latex System: MPI EXT 3.1A (Concrete Vertical Surfaces).
 - a. Prime Coat: Alkali-Resistant Primer, W.B. (MPI #3).
 - b. Intermediate Coat: Exterior latex matching topcoat (MPI #10).
 - c. Topcoat: Exterior latex (flat) (MPI #10).
- B. Galvanized-Metal Substrates: (Hollow Metal)
1. Latex System: MPI EXT 5.3A.
 - a. Prime Coat: W.B. Galvanized Primer (MPI #134).
 - b. Intermediate Coat: Exterior latex matching topcoat (MPI #11).
 - c. Topcoat: Exterior latex (semigloss) (MPI #11)

C. Exterior trim.

1. Latex System: MPI EXT 6.4K.
 - a. Prime Coat: Exterior latex wood primer (MPI #6).
 - b. Intermediate Coat: Exterior latex matching topcoat (MPI #11).
 - c. Topcoat: Exterior latex (semigloss) (MPI #11).
2. Latex Over Alkyd Primer System: MPI EXT 6.4G.
 - a. Prime Coat: Exterior alkyd wood primer (MPI #5).
 - b. Intermediate Coat: Exterior latex matching topcoat (MPI #11).
 - c. Topcoat: Exterior latex (semigloss) (MPI #11).

D. Plastic Trim Fabrication Substrates:

1. Latex System: MPI EXT 6.8AA.
 - a. Prime Coat: Bonding primer (solvent based) (MPI #69).
 - b. Intermediate Coat: Exterior latex matching topcoat (MPI #11).
 - c. Topcoat: Exterior latex (semigloss) (MPI #11)

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 09 91 23 - INTERIOR PAINTING (FOR PATCHING AND TOUCH-UP OF EXISTING BUILDINGS)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes surface preparation and the application of paint systems on the following interior substrates:
 - 1. Concrete (where shown).
 - 2. Concrete masonry units (CMU) (Where shown).
 - 3. Steel.
 - 4. Galvanized metal.
 - 5. Wood.
 - 6. Gypsum board.
- B. Related Sections include the following:
 - 1. Division 5 Sections for shop priming of metal substrates with primers specified in this Section.
 - 2. Division 9 painting Sections for special-use coatings.
 - 3. Division 9 painting Sections for Exteriors

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of topcoat product indicated.
- C. Product List: For each product indicated, include the following:
 - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
 - 2. Printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

1.4 QUALITY ASSURANCE

- A. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.
- B. Mockups: Apply benchmark samples of each paint system indicated and each color and finish selected to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
 - a. Wall Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
 2. Apply benchmark samples after permanent lighting and other environmental services have been activated.
 3. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
1. Benjamin Moore & Co.
 2. Columbia Paint & Coatings.
 3. Coronado Paint.
 4. Frazee Paint.
 5. General Paint.

6. Griggs Paint.
7. Kryton Canada Corporation.
8. Porter Paints.
9. PPG Architectural Finishes, Inc.
10. Sherwin-Williams Company (The).

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. Chemical Components of Field-Applied Interior Paints and Coatings: Provide products that comply with the following limits for VOC content, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24) and the following chemical restrictions; these requirements do not apply to primers or finishes that are applied in a fabrication or finishing shop:

1. Flat Paints and Coatings: VOC content of not more than 50 g/L.
2. Nonflat Paints and Coatings: VOC content of not more than 150 g/L.
3. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
4. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.
 - g. Di (2-ethylhexyl) phthalate.
 - h. Di-n-butyl phthalate.
 - i. Di-n-octyl phthalate.
 - j. 1,2-dichlorobenzene.
 - k. Diethyl phthalate.
 - l. Dimethyl phthalate.
 - m. Ethylbenzene.
 - n. Formaldehyde.
 - o. Hexavalent chromium.
 - p. Isophorone.
 - q. Lead.
 - r. Mercury.
 - s. Methyl ethyl ketone.
 - t. Methyl isobutyl ketone.

- u. Methylene chloride.
- v. Naphthalene.
- w. Toluene (methylbenzene).
- x. 1,1,1-trichloroethane.
- y. Vinyl chloride.

C. Colors: As selected by Architect from manufacturer's full range.

2.3 BLOCK FILLERS

A. Interior/Exterior Latex Block Filler: MPI #4.

1. VOC Content: E Range of E2 or E3.

2.4 PRIMERS/SEALERS

A. Interior Latex Primer/Sealer: MPI #50.

1. VOC Content: E Range of E2 or E3.
2. Environmental Performance Rating: EPR 1.

2.5 METAL PRIMERS

A. Quick-Drying Alkyd Metal Primer: MPI #76.

1. VOC Content: E Range of E2 or E3.

B. Waterborne Galvanized-Metal Primer: MPI #134.

1. VOC Content: E Range of E2 or E3.
2. Environmental Performance Rating: EPR 1.

2.6 LATEX PAINTS

A. Interior Latex (Eggshell): MPI #52 (Gloss Level 3).

1. VOC Content: E Range of E2 or E3.
2. Environmental Performance Rating: EPR 1

2.7 ALKYD PAINTS

A. Interior Alkyd (Semigloss): MPI #47 (Gloss Level 5).

1. VOC Content: E Range of E1 or E2.
2. Environmental Performance Rating: EPR 1

2.8 QUICK-DRYING ENAMELS

A. Quick-Drying Enamel (High Gloss): MPI #96 (Gloss Level 7).

1. VOC Content: E Range of E2 or E3.

2.9 FLOOR COATINGS

- A. Interior/Exterior Clear Concrete Floor Sealer (Water Based): MPI #99.

1. VOC Content: E Range of E2 or E3.

2.10 STAINED WOOD

- A. Water-Based Varnish over Stain System MPI INT 6.3W:

1. Stain Coat: Stain, semitransparent, for interior wood MPI #90.
 - a. First Intermediate Coat: Water-based varnish matching topcoat.
 - b. Second Intermediate Coat: Water-based varnish matching topcoat.
 - c. Topcoat: Varnish, water based, clear, satin (MPI Gloss Level 4), MPI #128.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Concrete: 12 percent.
 2. Wood: 15 percent.
 3. Gypsum Board: 12 percent.
- C. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- D. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Concrete Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- F. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- G. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- H. Wood Substrates:
1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
 2. Sand surfaces that will be exposed to view, and dust off.
 3. Prime edges, ends, faces, undersides, and backsides of wood.
 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
- I. Gypsum Board Substrates: Do not begin paint application until finishing compound is dry and sanded smooth.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
1. Use applicators and techniques suited for paint and substrate indicated.
 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
- E. Painting Mechanical and Electrical Work: Paint items exposed in equipment rooms and occupied spaces including, but not limited to, the following:
 - 1. Mechanical Work:
 - a. Uninsulated metal piping.
 - b. Uninsulated plastic piping.
 - c. Pipe hangers and supports.
 - d. Tanks that do not have factory-applied final finishes.
 - e. Visible portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets.
 - f. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - g. Mechanical equipment that is indicated to have a factory-primed finish for field painting.
 - 2. Electrical Work:
 - a. Switchgear.
 - b. Panelboards.
 - c. Electrical equipment that is indicated to have a factory-primed finish for field painting.

3.4 FIELD QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when paints are being applied:
 - 1. Owner will engage the services of a qualified testing agency to sample paint materials being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
 - 2. Testing agency will perform tests for compliance with product requirements.
 - 3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying-paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

A. Concrete Substrates, Nontraffic Surfaces:

- 1. Latex System: MPI INT 3.1E.
 - a. Prime Coat: Interior latex matching topcoat (MPI #53).
 - b. Intermediate Coat: Interior latex matching topcoat (MPI #53).
 - c. Topcoat: Interior latex (flat) (MPI #53).

B. CMU Substrates:

- 1. Latex System: MPI INT 4.2A.
 - a. Prime Coat: Interior/exterior latex block filler (MPI #4).
 - b. Intermediate Coat: Interior latex matching topcoat (MPI #52).
 - c. Topcoat: Interior latex (eggshell) (MPI #52)

C. Steel Substrates:

- 1. Quick-Drying Enamel System: MPI INT 5.1A.
 - a. Prime Coat: Quick-drying alkyd metal primer (MPI #76).
 - b. Intermediate Coat: Quick-drying enamel matching topcoat (MPI #81).
 - c. Topcoat: Quick-drying enamel (semigloss) (MPI #81)

D. Galvanized-Metal Substrates:

- 1. Latex Over Waterborne Primer System: MPI INT 5.3J.
 - a. Prime Coat: Waterborne galvanized-metal primer (MPI #134).
 - b. Intermediate Coat: Interior latex matching topcoat (MPI #54).
 - c. Topcoat: Interior latex (semigloss) (MPI #54).

E. Gypsum Board Substrates:

- 1. Latex System: MPI INT 9.2A.

- a. Prime Coat: Interior latex primer/sealer (MPI #50).
 - b. Intermediate Coat: Interior latex matching topcoat (MPI #52).
 - c. Topcoat: Interior latex (eggshell) (MPI #52).
- F. Cotton or Canvas Insulation-Covering Substrates: Including pipe and duct coverings
- 1. Latex System: MPI INT 10.1A.
 - a. Prime Coat: Interior latex primer/sealer (MPI #50).
 - b. Intermediate Coat: Interior latex matching topcoat (MPI #53).
 - c. Topcoat: Interior latex (flat) (MPI #53).

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 09 96 00 - HIGH-PERFORMANCE COATINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes surface preparation and application of high-performance coating systems on the following substrates: (Where called for)
 - 1. Interior Substrates:
 - a. Concrete masonry units (CMU).
 - b. Gypsum board.
- B. Related Sections include the following:
 - 1. Division 9 painting Sections for exterior/interior painting.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Initial Selection: For each type of finish-coat product indicated.
- C. Product List: For each product indicated. Cross-reference products to coating system and locations of application areas. Use same designations indicated on Drawings and in schedules.

1.4 QUALITY ASSURANCE

- A. Master Painters Institute (MPI) Standards:
 - 1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
 - 2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and coating systems indicated.
- B. Mockups: Apply benchmark samples of each coating system indicated to verify preliminary selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each type of coating and substrate.

- a. Wall and Ceiling Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
 - b. Other Items: Architect will designate items or areas required.
2. Apply benchmark samples after permanent lighting and other environmental services have been activated.
 3. Final approval of color selections will be based on benchmark samples.
 - a. If preliminary color selections are not approved, apply additional benchmark samples of additional colors selected by Architect at no added cost to Owner.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
 1. Maintain containers in clean condition, free of foreign materials and residue.
 2. Remove rags and waste from storage areas daily.

1.6 PROJECT CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
 1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

PART 2 - PRODUCTS

2.1 HIGH-PERFORMANCE COATINGS, GENERAL

- A. Material Compatibility:
 1. Provide materials for use within each coating system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 2. Provide products of same manufacturer for each coat in a coating system.
- B. Chemical Components of Interior Paints and Coatings: Provide products that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24) and the following chemical restrictions:
 1. Flat Paints and Coatings: VOC content of not more than 50 g/L.

2. Nonflat Paints and Coatings: VOC content of not more than 150 g/L.
3. Anticorrosive Coatings: VOC content of not more than 250 g/L.
4. Stains: VOC content of not more than 250 g/L.
5. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing 1 or more benzene rings).
6. Restricted Components: Paints and coatings shall not contain any of the following:
 - a. Acrolein.
 - b. Acrylonitrile.
 - c. Antimony.
 - d. Benzene.
 - e. Butyl benzyl phthalate.
 - f. Cadmium.
 - g. Di (2-ethylhexyl) phthalate.
 - h. Di-n-butyl phthalate.
 - i. Di-n-octyl phthalate.
 - j. 1,2-dichlorobenzene.
 - k. Diethyl phthalate.
 - l. Dimethyl phthalate.
 - m. Ethylbenzene.
 - n. Formaldehyde.
 - o. Hexavalent chromium.
 - p. Isophorone.
 - q. Lead.
 - r. Mercury.
 - s. Methyl ethyl ketone.
 - t. Methyl isobutyl ketone.
 - u. Methylene chloride.
 - v. Naphthalene.
 - w. Toluene (methylbenzene).
 - x. 1,1,1-trichloroethane.
 - y. Vinyl chloride.

C. Colors: As selected by Architect from manufacturer's full range.

2.2 BLOCK FILLERS

A. Epoxy Block Filler: MPI #116.

1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Cloverdale Paint; Epoxy Block Filler, 83065.
 - b. Columbia Paint & Coatings; [Carboline, Carboguard, 954HB] [Insl-x, Epoxy Block Filler, EXP 120].
 - c. Coronado Paint; Polyamide Epoxy Block Filler, 101-11.
 - d. Diamond Vogel Paints; V-Cote 100, Acrylic Epoxy Block Filler, MC-1234.
 - e. Frazee Paint; Ameron, Amerlock 400 BF, 400 BF.
 - f. General Paint; Ameron, Amerlock Block Filler, 400BF.

- g. ICI [Paints; Devoe Coatings, Devran 224HS, 224HS] [Paints; Devoe Coatings, Bar-Rust 231, 231] [Paints; Devoe Coatings, Bar-Rust 236, 236] [Devoe (Canada); Devoe, Devran High Build Epoxy, 224HS] [Devoe (Canada); ICI Devoe, Devran 224, 224KXXXX].
 - h. Miller Paint; PPG Aquapon, Polyamide Epoxy Block Filler, 97-685 Series.
 - i. PARA Paints; Insl-x, Epoxy Blockfiller, EXP 120.
 - j. Parker Paint Mfg. Co. Inc.; Ameron, Amerlock 400 BF, 400BF.
 - k. PPG Architectural Finishes, Inc.; Aquapon, Epoxy Block Filler, 97-685.
 - l. Rodda Paint Co.; Carboline, Carboguard 954HB.
 - m. Sherwin-Williams Company (The); Industrial & Marine, Kem Cati-Coat HS Epoxy Filler/Sealer, B24W400/V400 S.
 - n. Spectra-Tone; Insl-x, Epoxy Block Filler, EXP 120.
2. VOC Content: Minimum E Range of E1, E2, or E3.

2.3 INTERIOR PRIMERS/SEALERS

A. Interior Latex Primer/Sealer: MPI #50.

- 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
- 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Benjamin Moore & Co.; [(Canada), Moorespec, Int. Acrylic Latex Primer/Sealer, 586-00] [Regal, First Coat Latex Primer/Undercoater, 216] [Moorcraft, Latex Undercoater & Primer Sealer, 253-00].
 - b. California Paints; ProPrime, Latex Primer White, 54500.
 - c. Cloverdale Paint; Interior Latex Primer Sealer, 05250.
 - d. Columbia Paint & Coatings; [Premium Pro, Interior Latex Enamel Undercoater, 02-735-PP] [Insl-x, Waterbase Primer/Sealer/Stain Killer, AQ-0500].
 - e. Coronado Paint; Super Kote 5000, Latex Primer-Sealer, 40-11.
 - f. Dunn-Edwards Corporation; Eff-Stop, Acrylic Masonry Primer/Sealer, W 709.
 - g. Duron Inc.; Interior Acrylic [Drywall Primer, 04-124] [Latex Undercoater, 04-123].
 - h. Farrell-Calhoun; Perfik-Seal, Interior Latex Primer-Sealer, 380.
 - i. Flex Bon Paints; Interior Alkyd Latex Primer, 1071.
 - j. Frazee Paint; Aqua Seal, Interior Vinyl Acrylic Wall Sealer, 061.
 - k. General Paint; [Breeze, Super Seal Latex, 51-087] [Tradesman, Latex Sealer, 28-080].
 - l. Hirshfield's, Inc.; Hirshfield's Paint Manufacturing, Drywall Primer Interior Latex, 1250.
 - m. ICI Paints[; Prep-N-Prime, PVA Interior Primer Sealer, 1030] [; Prep-N-Prime, Interior Latex Wall Primer, 1000] [; Devoe/Fuller, Wonder-Tones, DR50801] [(Canada); Glidden, Dulux Interior Latex Sealer, 11000] [(Canada); Color Your World, Latex Primer, 9650].
 - n. Insl-x; Aqualock, Waterbase Primer/Sealer/Stain Killer, AQ-0500.
 - o. Iowa Paint Manufacturing Company, Inc.; Prime Line, Hi Hide PVA Primer, 516.

- p. Kelly-Moore Paints; [Acry-Prime, Interior Latex Primer Sealer, 971] [Enviro-Cote, Interior Latex Primer, 1505].
 - q. Kwal-Howells Paint; Accu-Pro, Interior Latex Flat Drywall Primer, 0890.
 - r. Miller Paint; Kril Primer Sealer, 6040.
 - s. Mills Paint; Superior Quality, Interior Latex Primer Sealer, 133.
 - t. Northern Paint; Colorlox, Hi Hide Latex Primer, 301-49.
 - u. PARA Paints; Prime Tech Hi-Hide Latex Primer, 5799.
 - v. Porter Paints; Interior Latex Sealer, 37725.
 - w. PPG Architectural Finishes, Inc.; Speedhide, Int. Latex Primer Sealer, 6-2.
 - x. Rodda Paint Co.; Scotseal, Heavy Bodied Latex Sealer, 50 7801 1.
 - y. Sherwin-Williams Company (The); [PrepRite, 200 Latex Primer, B28W200] [Quali-Kote, Interior Latex Primer, B28WQ8001].
 - z. Spectra-Tone; Jobmaster, PVA Latex Primer Sealer, 74.
 - aa. Vista Paint; Seal Cote, 155.
3. Environmental Characteristics:
- a. VOC Content:
 - 1) Minimum E Range of E2 or E3.
 - 2) Meets or exceeds LEED requirements for VOC content.
 - b. Environmental Performance Rating (EPR): Minimum EPR 2 or 3.

2.4 EPOXY COATINGS

A. Primer, Epoxy, Anti-Corrosive, for Metal: MPI #101.

- 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
- 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Benjamin Moore & Co.; Cortech, Surface Tolerant Epoxy Mastic Coating, V160.
 - b. PPG Architectural; Amercoat 235, AT235-75/AT235B.
 - c. PPG Architectural; Amercoat 385PA, AT385-A / AT385-B
 - d. PPG Architectural; Amerlock 2 AL, AK2-01A / AK2-01B
 - e. PPG Architectural; Amerlock 600, AK600
 - f. Sherwin Williams; Dura-Plate 235 Multi-Purpose Epoxy, B67W235 / B67V235
- 3. VOC Content: Minimum E Range of E1, E2 or E3

B. Epoxy, Cold-Cured, Gloss: MPI #77.

- 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
- 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Benjamin Moore & Co.; Polyamide Epoxy Coating, M36/M37.
 - b. Devoe/Fuller, Guardcote, DP34UXX.
 - c. Miller Paint; PPG Aquapon, Epoxy Cold Cured - Gloss, 95-1.
 - d. Porter Paints; Porterglaze 4000, Gloss Epoxy, 4000.
 - e. PPG Architectural Finishes, Inc.; Aquapon, Epoxy Cold Cured Gloss, 95-1.

- f. Tower Paint; Epoxy High Gloss Enamel, T8700.
- 3. VOC Content: Minimum E Range of E2 or E3.
- C. Epoxy, High Build, Gloss: MPI #98.
 - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, the following:
 - 2. Products: Subject to compliance with requirements, provide one of the following:
 - a. Benjamin Moore & Co.; Corotech, Polymide Epoxy Coating, V400.
 - b. PPG Architectural; High Performance Coatings, HPC High Gloss Epoxy, 95-502 / 95-509.
 - c. PPG Architectural; PMC, PPG HPC High Gloss Epoxy, 95-502 / 95-506.
 - d. Sherwin Williams; Pro Industrial, High Performance Epoxy; B67W00201 / B67V00200.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
 - 1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 - a. Concrete: 12 percent.
 - b. Gypsum Board: 12 percent.
 - 2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
 - 3. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
 - 4. Coating application indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.
 - 1. After completing coating operations, reinstall items that were removed; use workers skilled in the trades involved.
- C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers as required to produce coating systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
1. Clean surfaces with pressurized water. Use pressure range of [1500 to 4000 psi
 2. Abrasive blast clean surfaces to comply with SSPC-SP 7/NACE No. 4, "Brush-Off Blast Cleaning."
- E. CMU Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

3.3 APPLICATION

- A. Apply high-performance coatings according to manufacturer's written instructions.
1. Use applicators and techniques suited for coating and substrate indicated.
 2. Coat surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.
 3. Coat back sides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of finish coat but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.
- D. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.

3.4 FIELD QUALITY CONTROL

- A. Owner reserves the right to invoke the following procedure at any time and as often as Owner deems necessary during the period when coatings are being applied:
1. Owner will engage the services of a qualified testing agency to sample coating material being used. Samples of material delivered to Project site will be taken, identified, sealed, and certified in presence of Contractor.
 2. Testing agency will perform tests for compliance with specified requirements.
 3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with specified requirements. Contractor shall remove noncomplying coating materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove

rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.6 INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

- A. CMU Substrates:
 - 1. Epoxy Coating System:
 - a. Prime Coat: Interior/exterior latex block filler, MPI #4.
 - b. Intermediate Coat: Epoxy, cold-cured, gloss, MPI #77.
 - c. Topcoat: Epoxy, cold-cured, gloss, MPI #77.
- B. Gypsum Wallboard:
 - 1. Epoxy Coating System:
 - a. Prime Coat: Interior latex primer/sealer, MPI #50.
 - b. Intermediate Coat: Epoxy, cold-cured, gloss, MPI #77.
 - c. Topcoat: Epoxy, cold-cured, gloss, MPI #77.
- C. Galvanized Exterior Steel (Shop Primed):
 - 1. Epoxy Coating System:
 - a. Prime Coat: Primer, Epoxy, Anti-Corrosive, for Metal, MPI #101
 - b. Intermediate Coat: Epoxy, High Build, Gloss, MPI #98
 - c. Intermediate Coat: Epoxy, High Build, Gloss, MPI #98
 - 2. Surface Preparation: Allow to weather a minimum of 6 months prior to coating. Clean per SSPC-SP1 using detergent and water or a degreasing cleaner, then prime as required. When weathering is not possible or the surface has been treated with chromates or silicates, first solvent clean per SSPC-SP1 and apply a test area, priming as required. Allow the coating to cure at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP16 is necessary to remove these treatments.

END OF SECTION 09 96 00

**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 10 14 00 - SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Plaques.
2. Dimensional letters.
3. Panel signs.

1.2 DEFINITIONS

A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.3 SUBMITTALS

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

B. Shop Drawings: Show fabrication and installation details for signs.

1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
2. Provide message list, typestyles, graphic elements, including tactile characters and Braille, and layout for each sign.
3. Wiring Diagrams: Power, signal, and control wiring.

C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:

1. Aluminum.
2. Acrylic sheet.

D. Samples for Verification: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:

1. Plaque: Digital Image.
2. Dimensional Characters: Full-size Samples of each type of dimensional character (letter, number, and graphic element).

3. Aluminum: For each form, finish, and color, one full size character.
 4. Panel Signs: Not less than 12 inches square including border.
- E. Sign Schedule: Use same designations indicated on Drawings.
- F. Maintenance Data: For signs to include in maintenance manuals.
- G. Warranty: Special warranty specified in this Section.

1.4 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.
- C. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

1.5 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of signs in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Verify recess openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 COORDINATION

- A. Coordinate placement of anchorage devices with templates for installing signs.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
 - a. Deterioration of metal finishes beyond normal weathering.
 - b. Deterioration of embedded graphic image colors and sign lamination.
 2. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.
- B. Aluminum Extrusions: ASTM B 221, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.
- C. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).

2.2 PLAQUES

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Basis-of-Design Product: Subject to compliance with requirements, provide or a comparable product by one of the following:
 - 1. Advance Corporation; Braille-Tac Division.
 - 2. A. R. K. Ramos.
 - 3. Gemini Incorporated.
 - 4. Matthews International Corporation; Bronze Division.
 - 5. Metal Arts; Div. of L&H Mfg. Co.
 - 6. Mills Manufacturing Company.
 - 7. Nelson-Harkins Industries.
 - 8. Southwell Company (The).
- C. Cast Plaques: Provide castings free of pits, scale, sand holes, and other defects, as follows:
 - 1. Plaque Material: Bronze.
 - 2. Background Texture: Manufacturer's standard pebble texture.
 - 3. Border Style: Projected bevel.
 - 4. Mounting: As recommended.
- D. Plaque Schedule:
 - 1. Plaque Type Rectangular:
 - a. Plaque Size: Min. 18 x 36.
 - b. Text/Message: Name of project, year, name of schools superintendent, school board members, Architect and Contractor to be verified by Owner.
 - c. Location: As indicated.
 - d. Quantity: One

2.3 DIMENSIONAL LETTERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. ACE Sign Systems, Inc.
 - 2. Advance Corporation; Braille-Tac Division.
 - 3. A. R. K. Ramos.
 - 4. ASI-Modulex, Inc.
 - 5. Bunting Graphics, Inc.
 - 6. Charleston Industries, Inc.
 - 7. Gemini Incorporated.
 - 8. Grimco, Inc.
 - 9. Innerface Sign Systems, Inc.
 - 10. Metal Arts; Div. of L&H Mfg. Co.
 - 11. Mills Manufacturing Company.
 - 12. Mohawk Sign Systems.
 - 13. Nelson-Harkins Industries.
 - 14. Signature Signs, Incorporated.
 - 15. Southwell Company (The).

- C. Cast Characters: Produce characters with smooth flat faces, sharp corners, and precisely formed lines and profiles, free of pits, scale, sand holes, and other defects. Cast lugs into back of characters and tap to receive threaded mounting studs. Alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated. Comply with the following requirements:
 - 1. Character Material: Cast Aluminum
 - 2. Color(s): As selected by Architect from manufacturer's full range
 - 3. Mounting: Anchor bolts for substrates encountered.
 - 4. Size: See elevations sheet A4.1.

2.4 PANEL SIGNS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. APCO Graphics, Inc. (Basis of Design)
 - 2. ASI Signage Solutions
 - 3. Mohawk Sign

- B. Panel Signs: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner, complying with the following requirements:

1. Acrylic Sheet: 1/8" thick.
 2. Etched Photopolymer: Raised graphics with Braille 1/32 inch above surface with contrasting colors as selected by Architect from manufacturer's full range and laminated to acrylic back.
 3. Edge Condition: Beveled.
 4. Corner Condition: Square.
 - a. Mounting: Unframed.
 5. Wall mounted with exposed anchors.
 6. Colors: As selected by Architect from manufacturer's full range.
 7. Tactile Characters: Characters and Grade 2 Braille raised 1/32 inch above surface with contrasting colors.
 8. Basis of Design: DP-Tactile ADA
 - a. See Attachment 'A' Signage Schedule at end of this section.
 - b. See Attachment 'B' Sign Types at end of this section.
- C. Tactile and Braille Sign: Manufacturer's standard process for producing text and symbols complying with ADA-ABA Accessibility Guidelines and with ICC/ANSI A117.1. Text shall be accompanied by Grade 2 Braille. Produce precisely formed characters with square-cut edges free from burrs and cut marks. Braille dots with domed or rounded shape.
1. Panel Material: Opaque acrylic sheet.
 2. Raised-Copy Thickness: Not less than 1/32 inch.
- D. Colored Coatings for Acrylic Sheet: For copy and background colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and are UV and water resistant for five years for application intended.

2.5 ACCESSORIES (As needed)

- A. Anchors and Inserts: Provide nonferrous-metal or hot-dip galvanized anchors and inserts for exterior installations and elsewhere as required for corrosion resistance. Use toothed steel or lead expansion-bolt devices for drilled-in-place anchors. Furnish inserts, as required, to be set into concrete or masonry work.

2.6 FABRICATION

- A. General: Provide manufacturer's standard signs of configurations indicated.
1. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
 2. Preassemble signs in the shop to greatest extent possible. Disassemble signs only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation, in location not exposed to view after final assembly.
 3. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous.

2.7 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.8 ALUMINUM FINISHES

- A. Baked-Enamel Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting.
 - 1. Organic Coating: Thermosetting, modified-acrylic enamel primer/topcoat system complying with AAMA 2603 except with a minimum dry film thickness of 1.5 mils, medium gloss.

2.9 ACRYLIC SHEET FINISHES

- A. Colored Coatings for Acrylic Sheet: For copy and background colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for five years for application intended.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that items, including anchor inserts, are sized and located to accommodate signs.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
 - 1. Provide signs at every door unless instructed otherwise.
 - 2. Mechanical Fasteners: Use nonremovable mechanical fasteners placed through predrilled holes. Attach signs with fasteners and anchors suitable for secure attachment to substrate as recommended in writing by sign manufacturer.
 - 3. See Attachment 'C' Sign Location Detail at end of this section.
- B. Bracket-Mounted Signs: Provide manufacturer's standard brackets, fittings, and hardware for mounting signs that project at right angles from walls and ceilings. Attach brackets and fittings securely to walls and ceilings with concealed fasteners and anchoring devices to comply with manufacturer's written instructions.
- C. Dimensional Characters: Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
 - 1. Projected Mounting: Mount characters at projection distance from wall surface indicated.
- D. Cast-Metal Plaques: Mount plaques using standard fastening methods to comply with manufacturer's written instructions for type of wall surface indicated.
 - 1. Concealed Mounting: Mount plaques by inserting threaded studs into tapped lugs on back of plaque. Set in predrilled holes filled with quick-setting cement.

3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

END OF SECTION 10 14 00

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BUILDING 1 SIGNAGE SCHEDULE				
DOOR NO.	SIGN TYPE	SIGN VERBIAGE		REMARKS
		NUMBER	TEXT	
101	A	101	OFFICE	EXTERIOR MOUNTING
101A	A	101	OFFICE	
102	A	102	LAUNDRY	EXTERIOR MOUNTING
103	A	103	GIRLS LOCKERS	
	C2	104	SHOWER	AT OPENING TO ROOM
	C1	105	WOMEN	AT OPENING TO ROOM
106	A	106	STORAGE	EXTERIOR MOUNTING
107	A	107	MECHANICAL / ELECTRICAL	EXTERIOR MOUNTING

ALL ROOM NUMBERS WILL HAVE A BUILDING NUMBER BEFORE THE ROOM NUMBER OWNER WILL PROVIDE BUILDING NUMBER AT A LATER DATE

NOTE:

PROVIDE EVACUATION MAPS AT ALL EXITS FROM ROOMS WITH AN OCCUPANCY LOAD OF 6 OR MORE. SEE LIFE SAFETY PLAN FOR OCCUPANCY LOADS. COORDINATE LOCATIONS WITH ARCHITECT/OWNER IN FIELD

ATTACHMENT 'B'
SIGN TYPES



SIGN TYPE 'A'

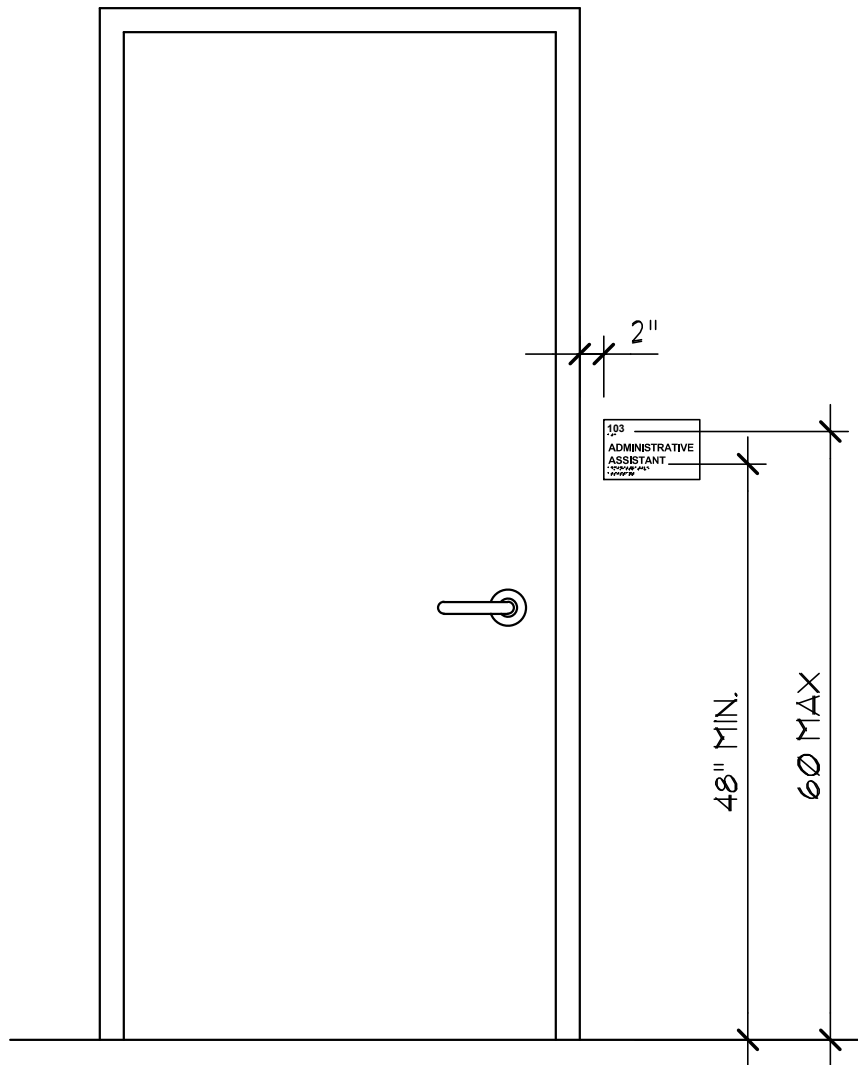


SIGN TYPE 'C1'



SIGN TYPE 'C2'

ATTACHMENT 'C'



SIGN LOCATION DETAIL

NO SCALE

NOTES:

1. AT DOUBLE DOORS WITH ONE INACTIVE LEAF SIGN SHALL BE LOCATED ADJACENT TO INACTIVE LEAF.
2. AT DOUBLE DOORS WITH TWO ACTIVE LEAFS SIGN SHALL BE LOCATED TO RIGHT OF RIGHT HAND DOOR.

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**BAY DISTRICT SCHOOLS
MOSLEY SOFTBALL FIELDHOUSE
CONSTRUCTION DOCUMENTS
APRIL 3, 2026**

SECTION 10 21 13 – PLASTIC TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-plastic toilet compartments configured as toilet enclosures and urinal screens.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

B. Shop Drawings: For toilet compartments.

1. Include plans, elevations, sections, details, and attachment details.
2. Show locations of cutouts for compartment-mounted toilet accessories.
3. Show locations of centerlines of toilet fixtures.
4. Show locations of floor drains.
5. Show ceiling grid, ceiling-mounted items and overhead support or bracing locations.

C. Samples for Initial Selection: For each type of toilet compartment material indicated.

1. Include Samples of hardware and accessories involving material and color selection.

D. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.

1.3 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents and source.
 - 1. Door Hinges: One hinge(s) with associated fasteners.
 - 2. Latch and Keeper: One latch(es) and keeper(s) with associated fasteners.
 - 3. Door Bumper: One bumper(s) with associated fasteners.
 - 4. Door Pull: One door pull(s) with associated fasteners.
 - 5. Fasteners: Ten fasteners of each size and type.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Flame-Spread Index: 25 or less.
 - 2. Smoke-Developed Index: 450 or less.
- B. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.

2.2 SOLID-PLASTIC TOILET COMPARTMENTS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the work, include but are not limited to, the following:
 - 1. ASI Global Partitions
 - 2. General Partitions Mfg. Corp.
 - 3. Scranton Products
 - 4. Hadrian
- B. Toilet-Enclosure Style: Floor mounted and overhead braced.

- C. Door, Pane, Screen, and Pilaster Construction: Solid, high-density polyethylene (HDPE) panel material, not less than 1 inch thick, seamless, with eased edges, no-sightline system, and with homogenous color and pattern throughout thickness of material.
 - 1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
 - 2. Color and Pattern: One color and pattern in each room as selected by Architect from manufacturer's full range.
- D. Pilaster Shoes and Sleeves (Caps): Manufacturer's standard design; polymer.
 - 1. Polymer Color and Pattern: Matching pilaster.
- E. Brackets (Fittings):
 - 1. Full-Height (Continuous) Type: Manufacturer's standard design; polymer.
 - a. Polymer Color and Pattern: Matching panel.
- F. Overhead Cross Bracing for Ceiling-Hung Units: As recommended by manufacturer and fabricated from solid polymer.

2.3 HARDWARE AND ACCESSORIES

- A. Hardware and Accessories: Manufacturer's heavy-duty operating hardware and accessories.
 - 1. Hinges: Manufacturer's minimum 0.062-inch thick stainless-steel continuous, cam type that swings to a closed or partially open position, allowing emergency access by lifting door. Mount with through-bolts.
 - 2. Latch and Keeper: Manufacturer's heavy-duty surface-mounted cast-stainless-steel latch unit designed to resist damage due to slamming, with combination rubber-faced door strike and keeper, and with provision for emergency access. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible. Mount with through-bolts.
 - 3. Coat Hook: Manufacturer's heavy-duty combination cast-stainless-steel hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories. Mount with through-bolts.
 - 4. Door Bumper: Manufacturer's heavy-duty rubber-tipped cast-stainless-steel bumper at out-swinging doors. Mount with through-bolts.
 - 5. Door Pull: Manufacturer's heavy-duty cast-stainless-steel pull at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible. Mount with through-bolts.
- B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with anti-grip profile and in manufacturer's standard finish.
- C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless-steel, hot-

dip galvanized-steel, or other rust-resistant, protective-coated steel compatible with related materials.

2.4 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M.
- B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M).
- C. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- D. Stainless-Steel Castings: ASTM A 743/A 743M.

2.5 FABRICATION

- A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.
- B. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- C. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.
- D. Door Size and Swings: Unless otherwise indicated, provide 38-inch wide, in-swinging doors for standard toilet compartments and 36-inch-wide, out-swinging doors with a minimum 32-inch wide, clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
 - 1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
1. Maximum Clearances:
 - a. Pilasters and Panels: 1/2 inch.
 - b. Panels and Walls: 1 inch.
 2. Full-Height (Continuous) Brackets: Secure panels to walls and to pilasters with full-height brackets.
 - a. Locate bracket fasteners so holes for wall anchors occur in masonry or tile joints.
 - b. Align brackets at pilasters with brackets at walls.
- B. Floor Anchored and Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels and adjust so tops of doors are parallel with overhead brace when doors are in closed position.

3.3 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors and doors in entrance screens to return doors to fully closed position.

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SECTION 10 28 00 - TOILET AND BATH ACCESSORIES

PART 1 - GENERAL

1.1 SUBMITTALS

- A. Product Data: For each type of product included. Include the following:
 - 1. Construction details and dimensions.
 - 2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
 - 3. Material and finish descriptions.
 - 4. Manufacturer's warranty.
- B. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

1.2 STRUCTURAL REQUIREMENTS: All grab bars and their mounting devices shall withstand a downward load of at least 250 lbs. of force when tested according to method in ASTM F 446.

1.3 WARRANTY

- A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within a 5-year period from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURER: Provide toilet and bath accessories as manufactured by Bobrick or approved equal.

2.2 GENERAL: Provide toilet and bath accessories as scheduled. Install units at locations and heights as indicated, plumb and level, firmly anchored, in accordance with manufacturer's instructions.

2.3 MATERIALS:

- A. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, 22 gage minimum, unless otherwise indicated.
- B. Mirror Glass: 1/4" thick, Type I, Class 1, Quality q2, conforming to FS DD-G-451, with silvering, copper coating, and protective organic coating complying with FS DD-M-411.

- C. Galvanized Steel Sheet: ASTM A 527, G60.
 - D. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.
 - E. Fasteners: Screws, bolts, and other devices of same material as accessory unit or of galvanized steel where concealed.
- 2.4 GENERAL FABRICATION: Stamped names or labels on exposed faces of toilet and bath accessory units are not permitted, however unobtrusive labels indicating manufacturer and model number are required on surface not exposed to view. Wherever locks are required for particular type of accessory, provide same keying throughout project. Furnish two keys for each lock, properly identified.
- B. Mirror Fabrication: Fabricate frames for glass mirrors to accommodate wood, felt, plastic, or other glass edge protection material. Provide mirror backing and support system which will permit rigid, tamperproof glass installation and prevent accumulation of moisture.
 - C. Surface-Mounted Accessories: Fabricate units with tight seams and joints, exposed edges rolled. Hang doors or access panels with continuous piano hinge or minimum of two 1-1/2" pin hinges of same metal as unit cabinet. Provide concealed anchorage wherever possible.
 - D. Recessed Toilet Accessories, General: Except where otherwise indicated, fabricate units of all welded construction, without mitered corners. Hang doors or access panels with full-length stainless steel piano hinge. Provide anchorage that is fully concealed when unit is closed.
- 2.5 TOILET ACCESSORY ITEMS: Provide the following toilet accessories by Bobrick Washroom Equipment Inc. or approved equal, unless otherwise noted.
- A. Grab Bars: Provide stainless steel grab bars with wall thickness not less than 18 gage, outside diameter 1-1/2", concealed mounting, with #4 polished satin finish. Refer to Drawings for configurations and size of grab bars. Provide concealed anchors for each flange as per manufacturer's recommendations. (*B-6806-36; B-6806-42*)
 - B. Stainless Steel Framed Mirrors: Fabricate frame with angle shapes of not less than 18 gage (.050"), with square corners mitered to hairline joints and mechanically interlocked; tamper-resistant concealed wall hanger. Provide in No. 4 satin polished finish. (*B-165 1836 18" x 36"*)
 - C. Twin Jumbo Roll Tissue Dispenser: Owner provided, contractor installed.
 - D. Surfaced Mounted Paper Towel Dispenser: Owner provided, contractor installed.

- E. Surface Mounted Soap Dispenser: Owner provided, contractor installed.
- F. Mop and Broom Holder/Utility Shelf: Combination unit with 18-gage (.050") Type 304 stainless steel shelf with 1/2" returns, 16-gage (.062") support brackets for wall mounting, provide 16-gage stainless steel hooks for wiping rags on front of shelf, together with spring-loaded rubber cam type mop/broom holders; 1/4" diameter stainless steel drying rod suspended beneath shelf. Provide 34" long unit with 3 mop/broom holders and 4 hooks. *(B-239 x 34)*
- G. Shower Rod, Shower Curtain Hooks, & Shower Curtain: Heavy-duty 20 gauge, Type 304 stainless steel, satin finish, 1" diameter rod. In lengths indicated on the drawings. *(B-6107)*. Hooks to be Type 304 stainless steel for use on the specified shower curtain rod. *(B-204-1)*. Shower curtain shall be opaque, matte white vinyl .008" thick, containing antibacterial and flame-retardant agents, and shall have nickel-plated brass grommets along top. Bottom and sides shall be hemmed. *(B204-2 (42"w) or B-204-3 (72"w)*

PART 3 - EXECUTION

3.1 INSTALLATION:

- A. Install toilet accessory units in accordance with manufacturer's instructions, using fasteners appropriate to substrate and recommended by manufacturer of unit. Install units plumb and level, firmly anchored in locations indicated and in accordance with the requirements of ADA.

3.2 ADJUSTING AND CLEANING

- A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.
- B. Remove temporary labels and protection coatings.
- C. Clean and polish exposed surfaces according to manufacturer's written recommendations.

END OF SECTION 10 28 00

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SECTION 10 44 13 - FIRE EXTINGUISHER CABINETS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Fire protection cabinets for the following:
 - a. Portable fire extinguishers.

B. Related Sections:

1. Division 10 Section "Fire Extinguishers."

1.2 SUBMITTALS

A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for fire protection cabinets.

1. Fire Protection Cabinets: Include roughing-in dimensions, details showing mounting methods, relationships of box and trim to surrounding construction, door hardware, cabinet type, trim style, and panel style.

B. Shop Drawings: For fire protection cabinets. Include plans, elevations, sections, details, and attachments to other work.

C. Product Schedule: For fire protection cabinets. Coordinate final fire protection cabinet schedule with fire extinguisher schedule to ensure proper fit and function. **Use same designations indicated on Drawings.**

D. Maintenance Data: For fire protection cabinets to include in maintenance manuals.

1.3 QUALITY ASSURANCE

A. Fire-Rated, Fire Protection Cabinets: Listed and labeled to comply with requirements in ASTM E 814 for fire-resistance rating of walls where they are installed.

1.4 COORDINATION

- A. Coordinate size of fire protection cabinets to ensure that type and capacity of fire extinguishers indicated are accommodated.
- B. Coordinate size of fire protection cabinets to ensure that type and capacity of fire hoses, hose valves, and hose racks indicated are accommodated.
- C. Coordinate sizes and locations of fire protection cabinets with wall depths.

1.5 SEQUENCING

- A. Apply **decals** and **vinyl lettering** on field-painted, fire protection cabinets after painting is complete.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B.
- B. Tempered Float Glass: ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, 3 mm thick, **Class 1 (clear)**.
- C. Tempered Break Glass: ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, 1.5 mm thick.

2.2 FIRE PROTECTION CABINET

- A. Cabinet Type: Suitable for fire **extinguisher**.
 - 1. Products: Subject to compliance with requirements, **available products that may be incorporated into the Work include, but are not limited to, the following:**
 - a. Fire End & Croker Corporation;.
 - b. J. L. Industries, Inc., a division of Activar Construction Products Group;.
 - c. Kidde Residential and Commercial Division, Subsidiary of Kidde plc; <.
 - d. Larsen's Manufacturing Company.
 - e. Modern Metal Products, Division of Technico Inc.;.
 - f. Moon-American;.
 - g. Potter Roemer LLC
 - h. Watrous Division, American Specialties, Inc.;.
- B. Cabinet Material: **Aluminum** sheet.
- C. Semirecessed Cabinet: Cabinet box partially recessed in walls of sufficient depth to suit style of trim indicated; with one-piece combination trim and perimeter door frame overlapping surrounding wall surface with exposed trim face and wall return at outer edge

(backbend). Provide where walls are of insufficient depth for recessed cabinets but are of sufficient depth to accommodate semi-recessed cabinet installation. (See Drawings)

1. Square-Edge Trim: **1-1/4- to 1-1/2-inch** backbend depth.
 2. Rolled-Edge Trim: **2-1/2-inch** backbend depth.
- D. Surface-Mounted Cabinet: Cabinet box fully exposed and mounted directly on wall with no trim. Provide where walls are of insufficient depth for semi-recessed cabinet installation. (See drawings)
- E. Cabinet Trim Material: **Steel sheet.**
- F. Door Material: **Steel sheet.**
- G. Door Style: **Fully glazed panel with frame.**
- H. Door Glazing: **Tempered break glass.**
- I. Door Hardware: Manufacturer's standard door-operating hardware of proper type for cabinet type, trim style, and door material and style indicated.
1. Provide **manufacturer's standard hinge** permitting door to open 180 degrees.
- J. Accessories: (As needed)
1. Mounting Bracket: Manufacturer's standard steel, designed to secure fire extinguisher to fire protection cabinet, of sizes required for types and capacities of fire extinguishers indicated, with plated or baked-enamel finish.
 2. Break-Glass Strike: Manufacturer's standard metal strike, complete with chain and mounting clip, secured to cabinet.
 3. Lettered Door Handle: One-piece, cast-iron door handle with the word "FIRE" embossed into face.
 4. Door Lock: **Cam lock that allows door to be opened during emergency by pulling sharply on door handle.**
 5. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location.
 - a. Identify fire extinguisher in fire protection cabinet with the words "**FIRE EXTINGUISHER**"
 - 1) Location: Applied to **cabinet door.**
 - 2) Application Process: Manufacturer's standard.
 - 3) Lettering Color: **Red.**
 - 4) Orientation: **Vertical.**
- K. Finishes:
1. Manufacturer's standard baked-enamel paint for the following:
 - a. Exterior of cabinet **door, and trim** except for those surfaces indicated to receive another finish.
 - b. Interior of cabinet.

2. Steel: **Baked enamel or powder coat.**

2.3 FABRICATION

- A. Fire Protection Cabinets: Provide manufacturer's standard box (tub) with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated.
 1. Weld joints and grind smooth.
 2. Provide factory-drilled mounting holes.
- B. Cabinet Doors: Fabricate doors according to manufacturer's standards, from materials indicated and coordinated with cabinet types and trim styles selected.
- C. Cabinet Trim: Fabricate cabinet trim in one piece with corners mitered, welded, and ground smooth.

2.4 GENERAL FINISH REQUIREMENTS

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces of fire protection cabinets from damage by applying a strippable, temporary protective covering before shipping.
- C. Finish fire protection cabinets after assembly.
- D. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

2.5 STEEL FINISHES

- A. Surface Preparation: Remove mill scale and rust, if present, from uncoated steel, complying with **SSPC-SP 5/NACE No. 1, "White Metal Blast Cleaning" or SSPC-SP 8, "Pickling"**. **After cleaning, apply a conversion coating suited to the organic coating to be applied over it.**
- B. Baked-Enamel or Powder-Coat Finish: Immediately after cleaning and pretreating, apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat. Comply with coating manufacturer's written instructions for applying and baking to achieve a minimum dry film thickness of **2 mils**.
 1. Color and Gloss: **As selected by Architect from manufacturer's full range**

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine walls and partitions for suitable framing depth and blocking where **recessed and semi recessed** cabinets will be installed.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Prepare recesses for **recessed and semirecessed** fire protection cabinets as required by type and size of cabinet and trim style.

3.3 INSTALLATION

- A. General: Install fire protection cabinets in locations and at mounting heights indicated **or, if not indicated, at heights indicated below:**
 - 1. Fire Protection Cabinets: **54 inches** floor to top of cabinet.
- B. Fire Protection Cabinets: Fasten cabinets to structure, square and plumb.
 - 1. Unless otherwise indicated, provide recessed fire protection cabinets. If wall thickness is not adequate for recessed cabinets, provide semi recessed fire protection cabinets.
 - 2. Provide inside latch and lock for break-glass panels.
 - 3. Fasten mounting brackets to inside surface of fire protection cabinets, square and plumb.

3.4 ADJUSTING AND CLEANING

- A. Remove temporary protective coverings and strippable films, if any, as fire protection cabinets are installed unless otherwise indicated in manufacturer's written installation instructions.
- B. Adjust fire protection cabinet doors to operate easily without binding. Verify that integral locking devices operate properly.
- C. On completion of fire protection cabinet installation, clean interior and exterior surfaces as recommended by manufacturer.
- D. Touch up marred finishes, or replace fire protection cabinets that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by fire protection cabinet and mounting bracket manufacturers.
- E. Replace fire protection cabinets that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION 10 44 13

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SECTION 10 44 16 - FIRE EXTINGUISHERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes portable, fire extinguishers and mounting brackets for fire extinguishers.
- B. Related Sections:
 - 1. Division 10 Section "Fire Extinguisher Cabinets."

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated. Include rating and classification, material descriptions, dimensions of individual components and profiles, and finishes for fire extinguisher and mounting brackets.
- B. Product Schedule: For fire extinguishers. Coordinate final fire extinguisher schedule with fire protection cabinet schedule to ensure proper fit and function. Use same designations indicated on Drawings.
- C. Operation and Maintenance Data: For fire extinguishers to include in maintenance manuals.
- D. Warranty: Sample of special warranty.

1.3 QUALITY ASSURANCE

- A. NFPA Compliance: Fabricate and label fire extinguishers to comply with NFPA 10, "Portable Fire Extinguishers."
- B. Fire Extinguishers: Listed and labeled for type, rating, and classification by an independent testing agency acceptable to authorities having jurisdiction.
 - 1. Provide fire extinguishers approved, listed, and labeled by FMG.

1.4 COORDINATION

- A. Coordinate type and capacity of fire extinguishers with fire protection cabinets to ensure fit and function.

1.5 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace fire extinguishers that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure of hydrostatic test according to NFPA 10.
 - b. Faulty operation of valves or release levers.
 - 2. Warranty Period: Six years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PORTABLE, HAND-CARRIED FIRE EXTINGUISHERS

- A. Fire Extinguishers: Type, size, and capacity for each fire protection cabinet and mounting bracket indicated.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Amerex Corporation.
 - b. Ansul Incorporated; Tyco International Ltd.
 - c. Badger Fire Protection; a Kidde company.
 - d. Buckeye Fire Equipment Company.
 - e. Fire End & Croker Corporation.
 - f. J. L. Industries, Inc.; a division of Activar Construction Products Group.
 - g. Kidde Residential and Commercial Division; Subsidiary of Kidde plc.
 - h. Larsen's Manufacturing Company.
 - i. Moon-American.
 - j. Pem All Fire Extinguisher Corp.; a division of PEM Systems, Inc.
 - k. Potter Roemer LLC.
 - l. Pyro-Chem; Tyco Safety Products.
 - 2. Valves: Manufacturer's standard.
 - 3. Handles and Levers: Manufacturer's standard.
 - 4. Instruction Labels: Include pictorial marking system complying with NFPA 10, Appendix B and bar coding for documenting fire extinguisher location, inspections, maintenance, and recharging.
- B. Multipurpose Dry-Chemical Type in Steel Container: UL-rated 4-A:60-B:C, 10-lb nominal capacity, with monoammonium phosphate-based dry chemical in enameled-steel container.

- C. (KITCHEN) Purple-K Dry-Chemical Type in Aluminum Container: UL-rated 120-B:C, 20-lb nominal capacity, with potassium bicarbonate-based dry chemical in enameled-aluminum container.

2.2 MOUNTING BRACKETS (Where indicated)

- A. Mounting Brackets: Manufacturer's standard galvanized steel, designed to secure fire extinguisher to wall or structure, of sizes required for types and capacities of fire extinguishers indicated, with plated or red baked-enamel finish.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Amerex Corporation.
 - b. Ansul Incorporated; Tyco International Ltd.
 - c. Badger Fire Protection; a Kidde company.
 - d. Buckeye Fire Equipment Company.
 - e. Fire End & Croker Corporation.
 - f. J. L. Industries, Inc.; a division of Activar Construction Products Group.
 - g. Larsen's Manufacturing Company.
 - h. Potter Roemer LLC.
- B. Identification: Lettering complying with authorities having jurisdiction for letter style, size, spacing, and location. Locate as indicated by Architect.
 - 1. Identify bracket-mounted fire extinguishers with the words "FIRE EXTINGUISHER" in red letter decals applied to mounting surface.
 - a. Orientation: Vertical.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine fire extinguishers for proper charging and tagging.
 - 1. Remove and replace damaged, defective, or undercharged fire extinguishers.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Install fire extinguishers and mounting brackets in locations indicated and in compliance with requirements of authorities having jurisdiction.
 - 1. Mounting Brackets: 54 inches above finished floor to top of fire extinguisher.

- B. Mounting Brackets: Fasten mounting brackets to surfaces, square and plumb, at locations indicated.

END OF SECTION 10 44 16

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SECTION 12 50 00 - WINDOW TREATMENT

PART 1 - GENERAL

RELATED DOCUMENTS

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

SUMMARY

This Section includes basic window treatment as follows:

Horizontal blinds.

SUBMITTALS

General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

Product data and installation instructions for each type of window treatment unit required. Include methods of installation for each kind of opening and supporting structure.

Samples for initial selection of colors, in form of manufacturers' color charts consisting of sections of exposed components with integral or applied finishes showing full range of colors and materials.

QUALITY ASSURANCE

General: Provide units produced by one manufacturer for each type required, with complete standard assemblies including hardware accessory items, mounting brackets, and fastenings.

Furnish materials in colors and patterns selected by Architect from manufacturers' standard colors/patterns.

PART 2 - PRODUCTS

HORIZONTAL BLINDS

Headrail: Channel-shaped section (minimum of .0.025” thick) complete with tilting mechanism, top and end braces, top cradles, cord lock, and accessory items required for type of blind and installation.

Bottom Rail: Tubular steel bottom rail, designed to withstand twisting or sagging. Contour top surface to match slat curvature, with flat or slightly curved bottom. Close ends with metal or plastic end caps of same color as rail. Finish rail in same color as slats.

Slats: Spring-tempered aluminum (louver blades), rounded corners with forming burrs removed, as follows:

Slat Width: 2 inch nominal slats, with other components sized to suit. Minimum 0.010” thick, supported by tape ladders.

Ladders: Designed to support and maintain slats at proper spacing and alignment in open and closed positions, as follows:

Braided polyester cord design consisting of vertical components of not less than 0.043-inch nor more than 0.068-inch in diameter and integrally braided ladder rungs of not less than 4 threads; space ladders not further than 23 inches apart and 7 inches from ends of slats.

Tilting Mechanism: Assembly including disengaging worm and gear mechanism to eliminate overdrive, low-friction gear tilter, drum and cradle at each ladder, tilt rod, tape clips, and grommet guides to prevent wear on ladder and cords; designed to hold slats at any angle and prevent movement of slats due to vibration, operated as follows:

Wand Operator: Detachable clear plastic wand, of proper length to suit blind installation, detachable without tools by raising locking sleeve.

Lifting Mechanism: Crashproof cord locks with cord separators and braided polyester or nylon lift cords with tassels at ends. Size cord to suit blind type. Include self-aligning cord equalizers designed to maintain horizontal blind position.

Installation Brackets: Designed to facilitate removal of head channels. Provide intermediate brackets at spacing recommended by blind manufacturer. Include hardware necessary for secure attachment of brackets to adjoining construction and to headrails. Design brackets to support safely the weight of blind assemblies plus forces applied to operate blinds.

Finish: Provide finishes indicated below. Finish exposed accessories and hardware to match rail color. Provide corrosion- resistant finish to concealed items of hardware.

Steel Components: Galvanize and either phosphate coat or prime exposed steel surfaces. Finish with baked-on synthetic resin enamel finish.

Aluminum Slats: Chemical conversion coat then follow with baked-on synthetic resin enamel finish coat.

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

Carey-McFall Corp.
Eastern Standard.
Graber Industries, Inc.
Hunter Douglas, Inc.
Kirsch Div., Cooper Industries.
Architectural Products Div., Levelor Lorentzen, Inc.

FABRICATION AND OPERATION

Prior to fabrication, verify actual opening dimensions by accurate site measurements. Adjust dimensions for proper fit at openings.

Coordinate with other trades for securing tracks to substrates and other finished surfaces.

Fabricate window treatment components from noncorrosive, nonstaining, nonfading materials that are completely compatible and do not require lubrication during normal expected life.

Fabricate blind units to openings fill openings from head to sill and jamb to jamb, except where egress windows occur, these windows shall be a separate unit.

Space slats to provide overlap for light exclusion when fully closed.

Equip horizontal blind units for the following operation:

Full-tilting operation with slats rotating approximately 180 deg. Place tilt operating controls on left-hand side of blind units unless otherwise indicated.

Full-height raising, to minimum stacking dimension, with lifting cord locks for stopping blind at any point of ascending or descending travel. Place pull cords on right-hand side of blind units unless otherwise indicated.

PART 3 - EXECUTION

INSTALLATION

General: Install window treatment units to comply with manufacturer's instructions. Position units level, plumb, secure, and at proper height and location relative to adjoining window units and other related work. Securely anchor units with clips, brackets, and anchorages suited to type of substrate.

Provide clearance between sash and blinds to permit unencumbered operation of sash hardware.

Isolate metal parts from concrete and mortar to prevent galvanic action. Use thick coating or other means recommended by manufacturer to effect separation.

Protect installed units to ensure their being in operating condition, without damage, blemishes, or indication of use at substantial completion of project. Correct nonconforming damaged units. Replace units that cannot be field corrected.

END OF SECTION 12 50 00