PROJECT MANUAL

DOOR AND HARDWARE REPLACEMENTS
AT
RUSSELL ELEMENTARY SCHOOL
2201 Sproul Road
Broomall PA 19008

FOR

MARPLE NEWTOWN SCHOOL DISTRICT
Administration Center
40 Media Line Road
Newtown Square, PA 19073

March 6, 2026

BMA BONNETT MEDICA ASSOCIATES INCORPORATED
ARCHITECTS • PLANNERS • ENGINEERS • PROJECT MANAGERS
1242 WEST CHESTER PIKE • UPPER FLOOR, SUITE 11
WEST CHESTER, PENNSYLVANIA 19382 • TELEPHONE 610•368•6678

TABLE OF CONTENTS OF SPECIFICATIONS AND CONTRACT DOCUMENTS

The following Table of Contents is included for reference only. The Contract shall include, but shall not be limited to, the following:

TABLE OF CONTENTS OF SPECIFICATIONS AND CONTRACT DOCUMENTS(continued)

TABLE OF CONTENTS OF SPECIFICATIONS AND CONTRACT DOCUMENTS(continued)

Division 32 – Exterior Improvements-Not Used

LIST OF DRAWINGS

ARCHITECTURAL

END OF SECTION

001115-INVITATION FOR BID

Sealed proposals will be received by the Marple Newtown School District, at the **Marple Newtown School District Administration Building** located at 40 Media Line Road, Newtown Square, PA 19073 until **2:00 PM, Tuesday, April 7, 2026,** for furnishing all the materials and performing all of the work for:

DOOR AND HARDWARE REPLACEMENTS
AT RUSSELL ELEMENTARY SCHOOL
2201 Sproul Road, Broomall, PA 19008
FOR THE MARPLE NEWTOWN SCHOOL DISTRICT
For the following prime contracts:
General Construction

The proposals will be publicly open at the time, date herein above listed.

Each bidder shall assume sole responsibility with respect to delivery of his bids. Each bid shall be submitted on the Form of Proposal furnished in the Specifications and must be accompanied with a bank cashier or Treasurer's check, or bid bond, for not less than ten percent (10%) of the total amount of the proposal, payable to the Marple Newtown School District and the Non-Collusion Affidavit furnished in the specifications. Each bidder shall be prepared to submit following his bid, evidence of his experience qualifications and financial ability to carry out the terms of the contract.

Construction Documents including Drawings and Project Manuals with Specifications produced by the office of Bonnett Medica Associates Incorporated and will be available after March 6, 2026 in an electronic format (Portable Document Format) on the Website www.box.com. The Bid Documents may be obtained by prospective bidders upon completion of the Bidder Registration Form and payment of a nonrefundable fee of **$50** in the form of company check or money order made payable to Bonnett Medica Associates, Incorporated. Registration forms may be obtained by contacting Rebecca Abel, Office Manager via email at rabel@bmarchitect.com, via telephone at 610-368-6678. Prospective bidders shall be required to obtain Website access and shall be granted a unique user name and password for tracking once the registration form is complete and payment is received. It is the responsibility of each bidder to check the Website frequently for additional posted information including Addenda. Construction Documents shall be available by appointment, for review, without charge, at Bonnett Medica Associates Inc, 1242 West Chester Pike, Upper Floor, Suite 11, West Chester, PA 19382.

All Bids must be sealed and plainly marked on the lower left corner of the envelope, "SEALED BID DOOR AND HARDWARE REPLACEMENTS AT RUSSELL ELEMENTARY SCHOOL". Bids must be submitted to the **Administration Building, 40 Media Line Road, Newtown Square, PA 19073,** to the attention of James Gallagher, Director of Operations, Marple Newtown School District.

No bid may be withdrawn within a period of Sixty (60) days after the opening of the bids. Any bid not in accordance with these requirements may be rejected. The School District reserves the right to reject any or all bids or parts thereof. The successful bidder will be required to furnish and pay for satisfactory Performance Bond, Payment Bond and Maintenance Bond.

A Pre-Bid Meeting will be held on Wednesday, March 25, 2026**.** Contractors shall report promptly to Russell Elementary School at 3:30 PM. The Russell Elementary School will be available for inspection by bidders on March 24, 2026, following the Pre-Bid Meeting. Bids will not be accepted from bidders who have not inspected the site and building.

The Drawings generally indicate the location of all work described in the Technical Specifications. The Contractor, prior to submitting his bid, shall visit the site to determine exact quantities of materials and labor and access all existing conditions, which will affect the contract. Upon executing a written Agreement with the Owner, the Contractor certifies that all existing conditions have been evaluated, quantities of all materials and labor have been established and that the contract will be completed for the costs stated in writing on the form of proposal and in the written Agreement.

BONNETT MEDICA ASSOCIATES INCORPORATED
ARCHITECTS • PLANNERS • ENGINEERS • PROJECT MANAGERS

001500- BIDDER REGISTRATION FORM

Name of Project: **Door and Hardware Replacements at Russell Elementary School**
Company Name: _____
Company Address (must include street address, PO Box only is not acceptable):
_____
_____
_____

Company Phone Number: _____
Company Fax Number: _____

Project Contact Person: _____

Project Contact Person Phone Number (if different from Company): _____

Project Contact Person Fax Number (if different from Company): _____

Project Contact Person Email Address: _____

Prime Contracts Bidding On: _____

WEBSITE link access information shall be distributed to bidders via email. Any use of the WEBSITE shall be registered under the Prime contractor given the specific user id and passcode. Addenda will be issued primarily by posting the addenda to the WEBSITE. It is the responsibility of each bidder to check the WEBSITE frequently for additional posted information including Addenda. At the discretion of the Architect, alternate means of distribution of addenda may be used including email, mail or via telefacsimile to each prospective bidder who has received a copy of the bid documents. Addenda or other posted information, if issued by means other than the WEBSITE, shall be issued to the attention of the prospective bidder's Project Contact Person as provided to the Architect by each prospective bidder on this Bidder Registration Form. It is the responsibility of each prospective bidder to accurately provide the Architect with the above information.

This Form must be Completed and Signed before any specifications and drawings will be distributed.
I have read and understood the statements above.

_____
Authorized Representative Signature Date

1242 WEST CHESTER PIKE • UPPER FLOOR, SUITE 11
WEST CHESTER, PENNSYLVANIA 19382 • TELEPHONE 610•368•6678

END OF SECTION 001500

002000-GENERAL INSTRUCTIONS TO BIDDERS

1. DEFINITIONS

A. Owner – The Marple Newtown School District. Administrative Offices located at the Administration Building, 40 Media Line Road, Newtown Square, PA 19073. The work is to be completed for the Marple Newtown School District.

B. School District – The Board of School Directors of the Marple Newtown School District herein be referred to as the School District.

C. Project –Door and Hardware Replacements at Russell Elementary School for Marple Newtown School District.

D. Architect - Bonnett Medica Associates Incorporated or their designated representatives and Consultants.

E. Engineer – Bonnett Medica Associates Incorporated or their designated representatives and Consultants.

2. BIDS

A. Bids will be received by the School District at the Administration Building, 40 Media Line Road, Newtown Square, PA 19073 until the day and hour set forth in the Invitation for Bids, at which time and place the bids will be publicly opened and immediately read.

B. All bids must be in writing, signed and sealed by the bidders, addressed to "Director of Operations, James Gallagher," and must be submitted in the form set forth in the Contract Documents. No bid shall be considered unless submitted in this form. The bid form shall be completely filled in and all amounts shall be written out in full and also stated in figures. All proposals must be marked as indicated in the Invitation for Bids.

C. All necessary information must be obtained by the bidders from the office of the Architect prior to the submission of the bids and all bids must be in accordance therewith. No proposal will be accepted which is not based upon the Drawings, Plans and Specifications, and other Contract Documents or which contains any letter or written memorandum qualifying same, or which is not properly made out and signed by the bidder, or by an authorized agent of the bidder.

D. Construction Documents including Drawings and Project Manuals with Specifications produced by the office of Bonnett Medica Associates Incorporated, 1242 West Chester Pike, Upper Floor, Suite 11, West Chester PA 19382 (610-368-6678) will be available after March 6, 2026 in an electronic format (Portable Document Format) on the Website www.box.com. The Bid Documents may be obtained by prospective bidders upon completion of the Bidder Registration Form and payment of a nonrefundable fee of $50.00 in the form of company check or money order made payable to Bonnett Medica Associates, Incorporated. Registration forms may be obtained by contacting Rebecca Abel, Office Manager via email at rabel@bmarchitect.com or via telephone at 610-368-6678 x.20. Prospective bidders shall be required to obtain website access and shall be granted a unique user name and password for tracking purposes once the registration form is complete and payment is received. It is the responsibility of each bidder to check the Website

frequently for additional posted information including Addenda. Construction Documents shall be available by appointment, for review, without charge, at the following location(s):

a. Bonnett Medica Associates Incorporated,1242 West Chester Pike, Upper Floor, Suite 11, West Chester PA 19382.

E. Proposals Forms shall be executed in the following manner:

a. Individual: Where the bidder is an individual, he shall sign the proposal personally.
b. Partnership: Where the bidder is a partnership, the proposal shall be signed in the name of the partnership by the signature of a partner.
c. Corporations: Where the bidder is a corporation, the proposal shall be executed in the name of the corporation, signed by the President or Vice President, and by the Secretary, or Assistant Secretary of the Corporation, and the corporate seal affixed thereto.
If the proposal is submitted by an agent other than the above, he shall submit evidence of his authority certified by the Secretary of the corporation under the Corporate Seal.

d. Where the bidder is trading under the Fictitious Names Act, the bid shall include the fictitious name and the names of the persons or corporations carrying on the said business.

F. The bidder shall make no changes in specifications. Alterations or interlineations to the bid on the Proposal Form may void the bid entirely or may void it as to the part interlined or altered, at the discretion of the School District.

G. Where alternate bids and/or unit prices are requested, as additions or deductions to the base bid, the bidder shall state the alternate bid and unit prices on the proposal form in the spaces provided thereon. The prices in every case, unless specifically noted otherwise, shall include materials, installation, in place, delivery, taxes, all other items in connection therewith which were included in the base bid.

H. The School District has the right to make an award within Sixty (60) Days after the opening of the bids and no bid may be withdrawn within that time.

I. The bids will be tabulated following their receipt and the School District will adopt a Resolution stating its intention to award the contract to the lowest responsible and responsive bidder and submit a written contract to the bidder for execution. The successful bidder shall sign the contract and return it to the School District within seven (7) days after the receipt of copy of the Resolution (or notice thereof in writing) together with the required Insurance Certificates, the Payment Bond and the Performance Bond. The surety bonds shall be in the form set forth in the Contract Documents and as required by the Public Works Contractors' Bond Law of 1967 Commonwealth of Pennsylvania (Act No. 385).

J. Bid figures shall include license fees, inspection fees and all charges including delivery into the destination called for in these specifications, as well as all taxes that are in effect at the time of submission of bid. They shall also include discounts other than the cash discount.

K. The School District may reject any bid not prepared and submitted in accordance with the provisions hereof and may waive any informalities in and reject any or all of the bids or any items or parts thereof.

L. Bids shall show both unit and total prices. Should figures be irreconcilable, the lowest price stated in the bid shall govern and awards will be made on this basis. It is mutually understood and agreed by and between the School District and the bidder that the School District may make its award for one or for more than one of the articles set forth in the Contract Documents or may make its award for all the articles set forth in the Contract Documents. The School District has the right to accept or reject all or any portion of any or all bids submitted.

3. BIDDER'S RESPONSIBILITY

A. Each bidder shall familiarize himself with all of the attached forms, General Instructions to Bidders, General Conditions, Supplementary General Conditions, Special Conditions, Specifications of all trades, Drawings of all trades, Bulletins, Addenda to the Specifications, and other documents pertinent to the work, as he/she will be held responsible to fully comply therewith.

B. The bidder shall visit the site of the work before submitting his bid, and shall examine all physical conditions, which might be, material to the performance of the work. The submission of a bid represents that the bidder has taken into consideration, in the establishment of the contract price, all existing conditions that will affect the work of the contract.

4. BIDDERS NOTE

A. Bids containing any omissions, unexplained erasures or alterations or items or conditions not called for in the specifications or Proposal Forms (bid forms) may be rejected as being unresponsive and/or incomplete.

B. A bidder may be called upon before the awarding of a contract to it to submit evidence of its experience and ability to promptly, efficiently and successfully carry out the scope of work outlined in these specifications. In order to present this evidence, the bidder may be required to submit survey forms completed by all current customers and customers for which the bidder completed work of a similar nature and scope over the past five years. Survey forms may be provided by the School District. In such cases, if the bidder is unable, through no fault of its own, to secure customer cooperation in completing the survey forms, the School District shall be notified of the names, addresses and telephone numbers of such customers and the School District may contact the same in an effort obtain such information. A bidder shall not to omit reference to any customer because of disagreements of conflicts.

C. A bidder shall, upon request by School District or its representatives, inform the School District in writing of the nature of any claims, suits or demands of any kind filed against it or it has filed against any customer for the period of the past five calendar years. Forms for this information may be provided by the School District. Such information shall describe in detail the nature of the claim, the amount of money in controversy, the arguments supporting each party’s claim and the manner in which the conflict was resolved.

D. Failure to comply with the foregoing instructions may result in rejection of the entire bid.

5. DEPOSIT

A. A non-refundable deposit in the amount stated in the Invitation for Bids is required to obtain drawings and specifications.

6. CERTIFIED CHECK OR BID BOND

A. A certified check or bid bond with surety satisfactory to the School District, for Ten Percent (10%) of the bid must accompany each bid as a guarantee that the bidder will enter into a contract in writing and furnish the required bonds and insurance certificates in the event that his bid is accepted.

B. Should the successful bidder fail to furnish the required bond or bonds within the time specified in the Board's Resolution or should he fail or refuse to execute a contract, the sum of Ten Percent (10%) of the successful bid is to be considered as liquidated damages to the School District for such failure or refusal, and the School District may retain the certified check or proceed on the Bond for such damages. The certified check is to be made payable to, or the bid bond is to be in favor of, the Marple Newtown School District.

C. Checks or bid bonds will be returned to all except the three lowest bidders immediately after the award, and the remaining checks or bid bonds will be returned after the award and signing of the contract and the furnishing of the required bonds and insurance certificates.

7. FINANCIAL STATEMENT AND PERFORMANCE RECORD

Clarification: Financial Statement and Performance Record, the performance and experience information required under this subparagraph C below shall be provided by the Certified Public Accountant indicated in subparagraph B upon request. Contractor experience documentation to be submitted with the bid shall be in accordance with Paragraph 28.

A. Bidders will be required to submit statements of their financial responsibility, technical qualifications and performance records before contracts will be awarded to them. In order that there may be no delay in the making of awards, bidders shall submit such statements immediately after the bid opening.

B. Financial Statement: The financial status of the bidder shall be brought down to date and shall show the bidder's net worth. If the statement is not brought down to date, it shall contain a declaration that the bidder's financial condition is as good or better than at the time the statement was made. Such declaration shall be made by a Certified Public Accountant.

C. Performance Record: The performance record shall include the following:

a. Advice as to whether the bidder maintains a permanent place of business, and, if so, where it is located.
b. Advice as to whether the bidder has a plant and equipment adequate to do the work properly and expeditiously, and if so, a list of the plant and equipment available for this work.

c. Advice as to whether the bidder has appropriate technical experience, and if so, a description of some projects which he has carried out satisfactorily and the date of completion of such construction.

8. CHANGES WHILE BIDDING

A. During the bidding period, bidders may be furnished addenda or supplemental bulletins for additions to or alterations of the drawings and/or specifications which shall be included in the work covered by the proposal and become a part of the Contract Documents.

B. If any prospective bidder on the proposed contract is in doubt as to the true meaning of any part of the drawings, specifications, or other proposed contract documents, he may submit to the Architect a written request for an interpretation thereof. The bidder submitting the request will be responsible for its delivery. Any interpretation of the proposed documents will be made only by an addendum, duly issued. The School District and Architect will not be responsible for any other explanations or interpretations of the proposed documents. Addenda will be issued primarily by posting the addenda to the website. It is the responsibility of each bidder to check the website frequently for additional posted information including Addenda. At the discretion of the Architect, alternate means of distribution of addenda may be used including email, mail or via telefacsimile to each prospective bidder who has received a copy of the bid documents. Addenda or other posted information, if issued by means other than the website, shall be issued to the attention of the prospective bidder's Project Contact Person as provided to the Architect by each prospective bidder on the Bidder Registration Form. It is the responsibility of each prospective bidder to accurately provide the Architect with the following information when obtaining a bid package:

a. Company Name
b. Company Address (must include street address, PO Box only is not acceptable).
c. Company Phone Number
d. Company Fax Number
e. Project Contact Person's Name
f. Project Contact Person's Phone Number (if different from Company Phone Number).
g. Project Contact Person's Email Address.

9. EXECUTION OF DOCUMENTS

A. In the execution of any documents, if any one other than a corporate officer signs for the Corporation, a certified copy of the Resolution authorizing such signature shall be furnished.

10. AWARDS

A. Award of Contracts will be made to the lowest responsible and responsive bidder on the base bid, or, at the discretion of the School District, including one or more of the alternates, if there are alternates.

11. FURNISHING BONDS

A. The lowest responsible and responsive bidder (Contractor) agrees that pursuant to the Provision of the Public Works Contractor's Bond Law of 1967 before the Contract is awarded to him, he shall furnish at his own expense to the School District:

a. A Performance Bond (in the form following) in an amount equal to one hundred percent (100%) of the Contract, conditioned upon the faithful performance of the Contract.

b. A Payment Bond (in the form attached) in an amount equal to one hundred percent (100%) of the amount of the Contract, such bond to be solely for the protection of claimant supplying labor or materials to the prime Contractor to whom the Contract was awarded, or to any of his sub-contractors, and shall be conditioned for the prompt payment of all such materials furnished or labor supplied or performed in the prosecution of the work. "Labor and material" shall include public utilities services and reasonable rental of equipment, but only for periods when the equipment rented is actually used at the site.

c. MAINTENANCE: A Maintenance Bond in the amount equal to ten percent (10%) of the amount of the contract shall be provided as a guarantee for the repair of all defects which may occur for one year after the date of acceptance of the work by the School District. The Maintenance Bond shall be issued to the Owner at the time of submission of project closeout documents.

d. SURETY: Surety on all bonds shall be satisfactory to the School District, and the Surety must have a certificate of Authority as an accepted surety on bonds furnished to the United States of America on Federal projects.

12. PROPOSAL (BID)

A. Bids shall be based on the Drawings, Plans and Specifications and Addenda, as issued.

13. ALTERNATES (IF ANY)

A. Each bidder shall fill in the spaces on the form of proposal opposite each numbered alternate. Failure to include a price for an Alternate bid may be cause for rejection of the entire Bid.

14. INSURANCE

A. Contractor’s Insurance Requirements

Before the contract is awarded, and unless otherwise approved by Marple Newtown School District (hereinafter referred to as the ‘District’) representative in writing, the Contractor shall, at its sole cost and expense, procure the following minimum types and limits of insurance, on forms reasonably acceptable to the District. Such insurance shall be maintained in full force and effect until completion of the Services or final acceptance of the entire Project or the completion of all post-acceptance warranty or related work by Contractor, whichever is later.

Coverage shall be obtained from reputable insurance carriers authorized to transact that class of business in the state where the work will be performed, or otherwise acceptable to the District, having an A.M. Best Rating of A- VII or better.

All insurance required herein shall be written on an "occurrence" basis, not "claims-made", with the exception of Professional Liability insurance, unless specifically approved by the District in writing.

1. General Liability

Commercial General Liability, written on an occurrence basis, covering bodily injury including death, and/or property damage to third parties, which may arise from ongoing and completed operations under the contract, whether such operations are performed by the Contractor or its subcontractors/subconsultants, anyone directly or indirectly employed by them, or anyone for whom they may be liable, with limits not less than:

Each Occurrence	$1,000,000
Personal and Advertising Injury	$1,000,000
Products/Completed Operations Aggregate	$2,000,000
Per Project Aggregate	$2,000,000
Damage to Rented Premises	$ 50,000
Medical Payments	$ 10,000
Abuse/Molestation (if applicable to services provided)	$1,000,000

The General Liability policy shall include contractual liability, covering liability assumed by the Contractor under the Indemnification and other provisions of the contract.

Any deductible under this coverage is subject to the District's approval, and shall be the sole responsibility of the Contractor.

2. Business Automobile Liability

Business Automobile Liability coverage for bodily injury and property damage arising out of the ownership, maintenance, or use of owned, non-owned, hired, and leased vehicles, including uninsured/underinsured motorists coverage, with limits not less than:

Combined Single Limit	$ 1,000,000
Uninsured/Underinsured Motorists Liability Limit	$ 1,000,000.

3. Workers' Compensation and Employers Liability

Workers' Compensation and Employers Liability as required by the state in which the work will be performed, including "other states" coverage (if applicable), and USL&H and Jones Act coverage (if applicable), with limits not less than:

Workers' Compensation	Statutory
Bodily Injury, each Employee	$500,000
Bodily Injury, each Accident	$500,000
Disease, each Employee	$500,000

If Contractor is an exempt self-insurer, sole proprietor, or independent contractor in Pennsylvania, a current exemption certificate shall be provided in lieu of evidence of Workers' Compensation coverage.

4. Umbrella Liability

Umbrella Liability applying excess of the General Liability, Automobile Liability, and Employers Liability policies, on a following-form basis, with limits not less than:

Each Occurrence	$5,000,000
Aggregate	$5,000,000.

Hazardous work may require higher limits, as requested by the District.

5. All Risk Builders Risk (if applicable)

All Risk (Special Form) Builders Risk insurance, including Earthquake and Flood to the extent reasonably commercially available, providing protection for building, structures, and materials or equipment to be installed in the project, while in the course of construction, in transit to the project site, and while being retained in off-site storage.
The Builders Risk policy shall be written to cover 100% of the completed value of the project, at replacement cost valuation, with an agreed amount provision (coinsurance waived).
Any deductible under this coverage shall be no more than $25,000, and shall be the sole responsibility of the Contractor.
The policy shall cover the insurable interests of the District, Contractor and Subcontractors in the Work. The District and Contractor waive all rights against each other for damages caused by fire or other perils to the extent payment is actually made under insurance provided under this paragraph, except such rights as they may have to the proceeds of such insurance held by the District. The Contractor shall require similar waivers by Subcontractors.
The District will procure such Builders Risk coverage in compliance with the above provisions, subject to information contained in Appendix 1, which shall be provided by Contractor following award of the bid.

6. Professional Liability/ Errors & Omissions Insurance (if applicable)

All Contractors who will perform, or retain others to perform, professional services in connection with the work (including but not limited to Consultants, Architects, Engineers, Design-Build, Project/Construction Managers) shall provide Professional Liability insurance covering negligent acts, errors, or omissions in the performance of their work, with limits not less than:

Each Claim	$3,000,000
Annual Aggregate	$3,000,000

Any deductible under this coverage is subject to the District’s reasonable approval, and shall be the sole responsibility of the Contractor.

7. Cyber Insurance

Contractor shall maintain, at its own expense throughout the Term, cyber liability insurance coverage or a cyber liability insurance rider in the Errors and Omissions policy providing privacy response coverage and third party liability coverage covering Contractor for claims, losses, liabilities, judgements, settlements, lawsuits, regulatory actions, and other costs or damages arising out of its performance under this Agreement, including any negligent or otherwise wrongful acts or omissions by Contractor or any employee or agent thereof in such amounts and on such terms as are reasonably acceptable to Client, but in no event less than the following: $3,000,000. This includes, but is not limited to: any breach of any law or regulation governing confidentiality of PHI (as defined under HIPAA) and Personal Information (as defined under the PA Act). Upon request, Contractor shall furnish Client, upon request, as evidence of coverage, a certificate of insurance for Cyber Liability and/or Errors and Omissions insurance. Contractor shall not cancel or reduce any such insurance without prior written consent of Client. Contractor shall notify Client in writing within five business days if it receives notice that its insurance carrier intends to terminate, cancel, non-renew or rescind cyber liability insurance or errors and omissions insurance.

8. Contractors Pollution Liability (if applicable)

All Contractors who will perform environmental services (including but not limited to asbestos or lead abatement, testing or remediation) shall provide Contractors Pollution Liability with limits not less than:

Each Claim or Occurrence	$5,000,000
Annual Aggregate	$5,000,000

The Contractors Pollution Liability policy shall include coverage for Emergency Response Costs, Contingent Transportation, Non-Owned Disposal Sites, and Natural Resource Damage. If coverage is written on a claims-made basis, an Extended Reporting Period, or tail coverage, shall be provided for two (2) years following completion of the insured's services. In the alternative, the Contractors Pollution Liability policy shall be renewed for not less than two years following completion. The policy retroactive date shall be no later than the effective date of this Agreement.

9. Performance & Other Bonds

Contractor shall furnish performance and payment Bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all Contractor's obligations.

Contractor shall furnish a Maintenance Bond in an amount equal to ten percent (10%) of the Contract including Change Orders. This Maintenance Bond shall be effective for a period of one (1) yearsfollowing the date established by the certificate of Substantial Completion.

All Bonds shall be executed by such Sureties as (i) are licensed to conduct business in the state where the Project is located, and (ii) are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Audit Staff Bureau of Accounts, U.S. Treasury Department. All Bonds signed by an agent must be accompanied by a certified copy of the authority to act and the Surety's financial statement.

If the Surety on any Bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located, Contractor shall within five (5) days thereafter substitute another Bond and Surety, both of which shall be acceptable to District.

General Insurance Provisions

All policies required hereunder other than Workers Compensation, Professional Liability, and Builders Risk shall name Marple Newtown School District and its departments, offices or agencies as applicable, and their officers, directors, agents, employees, and volunteers as additional insureds on a primary and noncontributory basis, for losses arising from the negligence of the Contractor or its subcontractors, or anyone for whom they may be liable. Additional insured status shall apply to Completed Operations.

All policies shall provide a Waiver of Subrogation in favor of Marple Newtown School District and its departments, offices or agencies as applicable, and their officers, directors, agents, employees, and volunteers, and/or other parties designated by the District.

Policies shall not be canceled, terminated, or non-renewed unless sixty (60) days prior written notice is sent by the insurer to the insured Contractor. Contractor shall immediately forward any such notice to District.

Contractor shall furnish to District Certificates of Insurance prior to the start of work, evidencing that all requirements have been met, and detailing the insurers providing coverage, types and limits of coverage, class of operations covered, and effective and expiration dates of coverage. Certificates shall specifically confirm the terms of coverage required herein, including Additional Insured status, waiver of subrogation, and that coverage is included for Abuse/Molestation (if applicable). A copy of the Additional Insured, Waiver of Subrogation, and Abuse/Molestation policy provisions or endorsements must be submitted with the Certificate. A renewal Certificate must be provided to District prior to the expiration date thereof.

Subcontractor/Subconsultants

Contractor shall require each subcontractor or subconsultant to provide insurance as outlined above. Such policies shall name Marple Newtown School District and its departments, offices, and agencies; Contractor; and the officers, directors, employees, agents, and volunteers of both, as additional insureds on a primary/noncontributory basis, for losses arising from the negligence of the subcontractor/subconsultant. Additional insured status shall apply to Completed Operations.

All policies shall provide a Waiver of Subrogation in favor of the Additional Insured parties.

Contractor shall be responsible for securing and maintaining certificates of insurance from all subcontractors/subconsultants evidencing the insurance coverages required herein.

The insurance coverages and limits required herein are designed to meet the minimum requirements of the District. They are not designed as a recommended insurance program for Contractor or its subcontractors/subconsultants. **Meeting these minimum requirements shall in no way limit or relieve the Contractor liability and obligations under any other provision of the Contract.** The Contractor shall acquire, at its own expense, any other Additional Insurance coverage it deems necessary for the protection of its work under this contract.

Self-Insurance

If Contractor maintains a self-insured program or a limited self-insurance program for any or all of the coverages listed above, a complete description of the program, with information on excess carriers and funding arrangements, and a copy of the Contractor's most recent audited financial statement, must be provided to District for review and approval, such approval not to be unreasonably withheld.

If District grants such approval, Contractor understands and agrees that Marple Newtown School District, offices or agencies as applicable, and their officers, directors, agents, employees, and volunteers shall receive the same coverages and benefits under Contractor self-insurance program that they would have received had the insurance requirements set forth above been satisfied with coverage provided by a commercial insurance company.

Non-Waiver of Indemnification

The insurance (including self-insurance) requirements set forth herein are not intended and shall not be construed to modify, limit, or reduce the indemnifications required of Contractor, nor to limit Contractor liability under this contract to the limits of the policies of insurance (or self-insurance) required to be maintained by Contractor hereunder.

BUILDERS RISK QUESTIONNAIRE

Owner/Insured:

First Named Insured:

List Additional Named Insured(s):
Prime Contractor:
Subcontractors:

Owner/Insured Mailing Address: _____

Additional Insured(s) (i.e., lender)**:** _____

General Contractor (and their experience): _____

Project Name: _____

Project Location: _____

Project Description (detailed, including whether renovation or new, and intended occupancy upon completion) _____

Total Number of Buildings: _____

Number of Stories: _____

Total Square Footage: _____

Direct Damage Limit (Completed Value): $ _____

Time Element Coverage Limit (optional):
(*see attached page for description*) $ _____

If Completed Value not required, less:

Excavation _____ Sheeting & Shoring _____
Underpinning _____ Site Work _____
Bonds _____ Other _____

Construction Type (i.e., fire resistive, masonry non-combustible, frame, etc.) _____

% of work subcontracted: _____

Value of work subcontracted: _____

Type of work subcontracted (and to whom): _____

Public fire protection at site:
Distance to fire station: _____
Distance to hydrant(s) or other water source: _____

Site Security (describe fencing, guards, local police patrol, etc.): _____

Construction schedule:
Estimated Start Date: _____
Project Term/Duration: _____

Coverage required for existing structure? (if yes, state amount, construction type, age and square footage)**:** _____

Inland transit or offsite storage exposure (if yes, state type and amount)**:** _____

Flood Coverage Desired: _____

Earthquake Coverage Desired: _____

Permission to Occupy Desired: _____

Testing Desired (if yes, provide detail of equipment/systems to be tested, and whether hot or cold testing)**:** _____

Comments _____
_____
_____

Please attach the following:

- Construction Schedule
- Construction Budget
- Detailed Description or Scope of Work

TIME ELEMENT COVERAGE

* **Time Element Coverage Definition:** Time Element coverage is a broad, general term for consequential financial losses including loss of income or increase in expenses caused by a direct property damage loss that results in not being able to use the property while it is being repaired or replaced. Time Element coverages may include loss of profit (including rental value), delay in completion or startup, and soft costs. Soft Costs is a term used to describe the costs associated with a construction project other than labor and materials.

* **Time Element Exposure Analysis:** Determination of a Time Element coverage limit should include a thorough review of the contract documents, construction schedules, financing terms, key materials and supply agreements (i.e., what are arrangements and lead time to order replacements if necessary?), leasing agreements, regulations affecting the construction, and any other

* **Time Element Coverages may include, but not be limited to:**
  - Loss of anticipated earnings, less noncontinuing expenses (including loss of rents)
  - Additional debt service/interest expense
    - additional interest that must be paid during period of delay to project financier
    - additional interest that results from cancellation of permanent financing, and re-negotiation of a new loan, possibly with higher interest rates
  - Additional real estate taxes
  - Additional advertising and promotional expense
  - Denial of access to the site by Civil Authority (for damage to premises other than at construction site)
  - Expenses to reduce loss

15. PRE-BID MEETING

A. A Pre-Bid Meeting will be held on Wednesday, March 25, 2026**,** at 3:30PM**.** Contractors shall report promptly to Russell Elementary School at 3:30PM. The building will be available for inspection by bidders following the Pre-Bid Meeting. Bids will not be accepted from bidders who have not inspected the site and building.

16. UNIT PRICES (IF ANY)

A. Submit unit prices for all items listed.

17. PERMITS

A. Bidders shall, without expense to the Owner, be responsible for obtaining all necessary licenses and permits and for complying with all applicable Federal, State and local laws, codes and regulations in connection with the prosecution of the work. The cost of licenses, fees, Township required business privilege tax, etc. shall be borne by the bidder. The Owner shall be responsible for the cost of permits and municipality inspection fees and shall pay for permits and inspection fees directly to the municipality and the Commonwealth of Pennsylvania as required.

18. COMPLIANCE WITH POLICY/LAW:

A. Contractor shall comply with all policies, procedures and regulations of the District as established and amended from time to time as well as all applicable state and federal laws and regulations, including but not limited to the provisions of the Pennsylvania Right to Know Law, 65 P.S. 67.101 et seq., regarding possession of public records by agency contractors. In the event the District receives a request for access to a public record that is in the possession of Contractor, the District shall notify Contractor of the request and Contractor shall provide the District with the requested record in a timely manner so as to enable District compliance with the Pennsylvania Right to Know Law.

Contractor shall maintain and provide to the District a current Child Abuse History Clearance as provided by the Pennsylvania Department of Human Services, a satisfactory PA State Criminal History Report, and a Federal Criminal History Record Report (FBI Fingerprinting) for each individual engaged by Contractor to provide services who will have direct contact with children, including Contractor (if an individual).

Contractor agrees to comply with the provisions of Act 168 of 2014, Employment History Review Law and, to the extent applicable, Act 126 of 2012, Child Abuse Recognition and Reporting Training.

19. STATEMENT OF COMPLIANCE WITH PENNSYLVANIA ACT 34

A. All vendors or contractors providing services to the School District must comply with ACT 34 of 1985 GUIDELINES (SECTION III OF THE PUBLIC SCHOOL CODE). All criminal history background checks and appropriate forms must be on file with the School District prior to performing such services.

GENERAL

Before work begins, Independent Contractors and Sub-Contractors having employees working in the Marple Newtown School District shall be required to do the following:

1. Provide a list of all current employees of the Contractor who will work within the School District.

2. Present the original document(s), current Request for Criminal Record Check (PA State Form SP4 164, 3-91) as returned from the Pennsylvania State Police, and/or Report of Federal Criminal History Record Information from the Federal Bureau of Investigation, to the Office of the Director of Support Services, for any person assigned to work within the School District. Original will be returned to Contractor and a copy retained by the School District. **It is required that this required documentation to be submitted two (2) weeks prior to the date any person is to work within the School District.**

3. If any new employees are added to the work force during the course of the work, such employee/s must follow this same procedure described above.

4. All costs for the Criminal History Information check/s will be borne by the prospective independent contractor.

5. The School District will follow the regulations promulgated by State Board of Education concerning the confidentiality of the Criminal History Record Information obtained pursuant to the Act.

B. As noted, the Act 34 of 1985 has become Bid Compliance Requirements and failure to comply will lead to exclusion of such employees from the project site.

C. Pennsylvania State Form (SP 164) (3-91) may be obtained from local State Police Barracks or online at PATCH (epatch.pa.gov).

20. STATEMENT OF COMPLIANCE WITH PENNSYLVANIA ACT 114

A. All vendors and contractors providing services to the School District must comply with ACT 114 of 2006, Section 111 of the PUBLIC SCHOOL CODE as amended effective April 1, 2007. All Federal Criminal History Record background checks and appropriate forms must be on file with the School District prior to performing such services.

GENERAL

Before work begins, Independent Contractors and Sub-Contractors having employees working in the School District, shall be required to do the following:

a. Provide a list of all current employees of the Contractor who will work within the School District.

b. Present the original document(s), current Federal Criminal History (CHRI) Clearance furnished by the FBI and as returned from the Pennsylvania Department of Education (PDE), to the Office of the Manager of Support Services, for any person assigned to

work within the School District. This document must bear the Commonwealth Seal embedded on the paper. Original will be returned to the Contractor and a copy retained by the School District. **It is required that this required documentation to be submitted two (2) weeks prior to the date any person is to work within the School District.**

i. The Background Check is performed by IDEMIA. The registration website is available online 24 hours/day, seven days per week and pre-enrollment can be completed online or over the phone. https://uenroll.identogo.com or 1-844-321-2101(M-F 8.am.-6 p.m.). The applicant will pay for the finger-print service and Criminal History Record; all applicants must register prior to going to the fingerprint site; register on-line at the web site above.

ii. The applicant's scanned fingerprints will be electronically transmitted to the Pennsylvania State Police who in turn submits the fingerprints and demographic information to the FBI.

iii. PDE will receive the Federal Criminal History Record from the FBI and forward the report to the applicant/contractor.

c. If any new employees are added to the work force during the course of the work, such employee/s must follow this same procedure described above.

d. All costs for the FBI Federal Criminal History Records checks will be borne by the prospective independent contractor.

e. The School District will follow the regulations promulgated by the Pennsylvania Department of Education concerning the confidentiality of the FBI Federal Criminal History Records Information obtained pursuant to the Act.

B. As noted, the Act 114 has become a Bid Compliance Requirement and failure to comply will lead to exclusion of such employees from the project site.

21. STATEMENT OF COMPLIANCE WITH PENNSYLVANIA ACT 151

C. Under certain conditions of Act 151, independent contractors and their employees who provide services to a Pennsylvania school entity are required to obtain a report of "Pennsylvania Child Abuse History Clearance" from the Pennsylvania Department of Human Services.

GENERAL

Before work begins, Independent Contractors and Sub-Contractors having employees working in the Marple Newtown School District, shall be required to do the following:

a. Provide a list of al current employees of the Contractor who will work within the School District.

b. Present the original document(s), current Pennsylvania Child Abuse History Clearance as returned from the Department of Human Services, to the Office of the Manager of Support Services, for any person assigned to work within the School District. Original will be returned to Contractor and a copy retained by the School

District. **It is required that this required documentation to be submitted two (2) weeks prior to the date any person is to work within the School District.**

c. If any new employees are added to the work force during the course of the work, such employee/s must follow this same procedure described above.

d. All costs for the Child Abuse History Information check/s will be borne by the prospective independent contractor. Child Welfare Information Solution (CWIS) charges a fee of $13 for the statement and is required to comply with the request for statements within 14 days of receipt.

e. The School District will follow the regulations promulgated by the State Board of Education concerning the confidentiality of the Child Abuse History Record Information obtained pursuant to the Act.

D. As noted, the Act 151 has become a Bid Compliance Requirement and failure to comply will lead to exclusion of such employees from the project site.

E. Pennsylvania State Form [CY113 3-95] may be obtained from the Pennsylvania State Police, (717) 783-6211.

22. PREVAILING WAGE

A. This regulation and the general Pennsylvania prevailing minimum wage rates, (Act 442 of 1961, P.L., 987, amended), as determined by the Secretary of Labor and Industry, which shall be paid for each craft or classification of all workers needed to perform the contract.

23. LIENS

A. Neither the final payment nor any part of the retained percentage shall become due until the contractor, if required, shall deliver to the School District a complete release of all liens arising out of this contract, or receipts in full thereof, and, if required in either case, an affidavit that so far as he has knowledge or information the release and receipt include all the labor and material for which a lien could be filed. But the contractor may, if any subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the School District, to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the contractor shall refund to the School District all monies that the latter may be compelled to pay in discharging such lien, including all costs and a reasonable attorney's fee.

24. INDEMNITY AGREEMENT

A. The bidder does hereby agree that, if awarded the contract under these specifications, he/she will indemnify and save harmless the School District, its members, the Architect and Engineer from all suits and actions of every nature and description brought against them or any of them growing out of any contract or contracts, written or verbal, entered into between the School District and the successful bidder, and further that upon the awarding of the contract to the bidder, in accordance with these specifications, this agreement of indemnifications shall automatically become effective.

25. ASBESTOS STATEMENT

A. In the event a contractor by virtue of his work for the School District discovers asbestos, the contractor must immediately notify the School District and perform no further work in connection with the asbestos. The School District will remove the asbestos then the contractor may resume operations under the contract.

26. SALES AND USE TAX

A. The Contractor shall comply with and shall at all times take all necessary and appropriate actions to protect the School District in respect to the provisions of the Pennsylvania Tax Reform Code of 1971, as amended, including but not limited to the Omnibus Amendments contained in Act No. 45 of 1998.

B. The Contractor specifically acknowledges that the Pennsylvania Sales and Use Tax shall not be imposed upon the sale at retail to or use by any construction contractor of building machinery and equipment and services thereto that are utilized in the Project. The term "contractor" applies to all prime contractors and all subcontractors. The term "building machinery and equipment" means generation equipment, storage equipment, conditioning equipment, distribution equipment, and termination equipment which is defined as being limited to:

   a. air conditioning limited to heating, cooling, purification, humidification, dehumidification and ventilation;
   b. electrical;
   c. plumbing;
   d. communications limited to voice, video, data, sound, master clock and noise abatement;
   e. alarms limited to fire, security and detection;
   f. control system limited to energy management, traffic and parking lot and building access;
   g. medical system limited to diagnosis and treatment equipment, medical gas, nurse call and doctor paging;
   h. laboratory system;
   i. cathodic protection system; or
   j. furniture, cabinetry and kitchen equipment. The term shall include boilers, chillers, air cleaners, humidifiers, fans, switchgear, pumps, telephones, speakers, horns, motion detectors, dampers, actuators, grills, registers, traffic signals, sensors, card access devices, guardrails, medical devices, floor troughs and grates and laundry equipment, together with integral coverings and enclosures, whether or not the item constitutes and fixture or is otherwise affixed to the real estate structure. The term "building machinery and equipment" shall not include guardrails posts, pipes, fittings, pipe supports and hangers, valves, underground tanks, wire, conduit, receptacle and junction boxes, insulation, ductwork and coverings thereof.

C. The contractor hereby assigns and transfers to the School District any and all rights to apply for and to receive refunds for any and all Sales and Use Tax which may have been paid under or pursuant to this Contract. The Contractor is prohibited from the filing of any claim for refund of Sales and Use Tax by virtue of this assignment. The contractor agrees to execute any

additional forms of documents to effectuate this assignment and transfer upon request by the School District.

D. The Contractor shall check all materials, equipment and labor entering into the Work and shall keep such full and detailed accounts as may be necessary for proper financial management under this Agreement, and the system shall be satisfactory to the School District. The School District or its designee shall be afforded access to all the Contractor's records, books, correspondences, instructions, drawings, receipts, vouchers, memoranda and similar data relating to this Contract, and the Contractor shall preserve all such records for a period of three (3) years, or for such longer period as may be required by law, after the final payment.

E. The Contractor agrees that the School District will be damaged in an undeterminable amount if the School District is not provided with access to all records specified in Supplementary General Conditions, Paragraphs 22 and 23 for the purpose of investigating and pursuing refunds of Sales and Use Tax. Notwithstanding any other contractual provision and in addition thereto, Contractor agrees to pay to the School District an amount equal to six percent (6%) of the amount of the prime contract as stipulated damages shall contractor deny access to any records requested.

27. QUALIFICATIONS OF CONTRACTORS

A. Bidders shall be prepared to submit upon request within three (3) days of the date of receipt of construction proposals, a Financial Statement prepared by a certified public accountant. Failure of a bidder to provide a Financial Statement within the time frames indicated will affect the schedule of the project and may be causes for disqualification of the bidder's proposal. The Financial Statement shall include the following:

a. Profit and Loss Statement
b. Balance Sheet
c. Dunn and Bradstreet Financial Report.

B. The Profit and Loss Statement and the Balance Sheet shall be provided for the previous two fiscal years and the current fiscal year to date.

28. EXPERIENCE OF BIDDERS AS CONTRACTORS

A. **Each bidder shall submit with their bid**, proof in a form satisfactory to the School District, of the exact nature and extent of the prior experience of the bidder as a contractor in the particular type and scope of construction for which his/her proposal is being submitted. Proof shall include, as a minimum, a list of three (3) similar projects completed by the bidder within five (5) years of the date of receipt of proposals for this Project, which are at least 75% of the total individual prime contract cost of the amount of the bidder's proposal for this Project. The total amount of each project shall be stated.

The requirements of this Paragraph 28 Experience of Bidders as Contractors must be satisfied by the corporate or business entity which is the "Bidder". These requirements cannot be satisfied by the use of the experience of employees or principals of the Bidder.

B. **The bidder shall provide with his/her proposal**, the following additional information about the three (3) similar projects referred to in subparagraph A, above.

a. Name, address, telephone number and email address, of the School District and the Architect or Engineer of each project listed.
b. Name and address of the bidder's project Superintendent for each project listed.
c. Name, address and telephone number of other prime contractors employed on each of the projects listed.

C. Upon request, bidders shall submit within three (3) days of the date of the request the name, address and resume of the full time superintendent to be employed by the bidder if awarded the contract. The bidder shall agree to maintain the identified superintendent in a full time capacity for the duration of the contract to the extent that the superintendent shall remain an employee of the bidder. The Superintendent shall have been a superintendent on at least three (3) previous projects of a value of at least 75% of the value of the bidders proposal. Evidence of experience shall be submitted, in form satisfactory to the School District, within three (3) days of the request of the School District.

D. Upon request, the bidder shall provide within three (3) days of the date of the request a list of all projects completed within the past five (5) years indicating the name of the project School District and architect or engineer for each project.

E. Failure of bidder to provide information as required under this paragraph 28 may be cause for disqualification of the bidder's proposal.

29. AFFIRMATIVE ACTION PROGRAM

A. Upon request, each bidder shall have a formal documented Affirmative Action Program and must submit within three (3) days of the date of the request a written statement describing the exact nature, scope and history of their Affirmative Action Program in the interest of extending work opportunities to qualified minority workers.

B. Failure of a bidder to provide information as required under this paragraph may be cause for disqualification of the bidder's proposal.

30. DISCRIMINATION PROHIBITED: According to 62 Pa C.S.A. § 3701, the contractor agrees that:

A. In the hiring of employees for the performance of work under the contract or any subcontract, no contractor, subcontractor or any person acting on behalf of the contractor or subcontractor shall by reason of gender, race, creed or color discriminate against any citizen of this Commonwealth who is qualified and available to perform the work to which the employment relates.

B. No contractor or subcontractor or any person on their behalf shall in any manner discriminate against or intimidate any employee hired for the performance of work under the contract on account of gender, race, creed or color.

C. The contract may be canceled or terminated by the government agency, and all money due or to become due under the contract may be forfeited for a violation of the terms or conditions of that portion of the contract.

31. HUMAN RELATIONS ACT

A. The provisions of the Pennsylvania Human Relations Act, Act 222 of October 27, 1955 (P.L. 744) (43 P.S. Section 951, et. seq.) of the Commonwealth of Pennsylvania prohibit discrimination because of race, color, religious creed, ancestry, age, sex, national origin, handicap or disability, by employers, employment agencies, labor organizations, contractors and others. The contractor shall agree to comply with the provisions of this Act as amended that is made part of this specification. Your attention is directed to the language of the Commonwealth's non-discrimination clause in 16 PA Code 49.101.

32. COMPLIANCE WITH STEEL PRODUCTS PROCUREMENT ACT

A. PROVISION FOR THE USE OF STEEL AND STEEL PRODUCTS MADE IN THE U.S.: In accordance with Act 3 of the 1978 General Assembly of the Commonwealth of Pennsylvania, if any steel or steel products are to be used or supplied in the performance of the contract, only those produced in the United States as defined therein shall be used or supplied in the performance of the contract or any subcontracts there under. In accordance with Act 161 of 1982, cast iron products shall also be included and produced in the United States. Act 141of 1984 further defines "steel products" to include machinery and equipment. The act also provides clarifications and penalties.

33. PROHIBITION ON CASH ALLOWANCES:

A. In accordance with Commonwealth of Pennsylvania Laws and Regulations, no cash allowances shall be included in the Contracts

B. The Drawings, and/or Specifications indicate the standard of quality and they with conditions at the project site indicate a finite quantity of materials and work, specialties, and items of work required.

C. In those instances where it is known that quantities required may exceed those specified, as the result of conditions impossible to anticipate, the Contractor shall state in his Proposal the unit price for such additional work, but no cash allowance for such additional quantity will be permitted.

34. COMPETENT WORKMEN:

A. No workmen shall be regarded as competent first class, within the meaning of this Act, except those who are duly skilled in their respective branches of labor, and who shall be paid not less than such rates of wages and for such hours work as shall be established and current rates of wages paid for such hours by employers of organized labor in doing of similar work in the district where work is being done.

35. STANDARD OF QUALITY:

A. The various materials and products specified in the specifications by name or description are given to establish a standard of quality and of cost for bid purposes. It is the intent of the specifications to review and approve or reject substitutions in accordance with the terms and conditions of Special Conditions, Paragraph 3, Substitutions of Material. In addition, it is the intent of the specifications, where specifically noted, to not allow equals or substitutions of certain system(s), product(s) and / or material(s) specified. In such cases, the bidders shall base their bid on the system(s), product(s) and / or material(s) specified only.

36. PERFORMANCE AND QUALITY OF WORK

A. Work performed shall be in strict accordance with these General Conditions and the technical specifications that follow.

B. All materials unless otherwise specified shall be new and free from any defects.

C. All work shall be performed by competent workman and executed in a neat and workmanlike manner providing a thorough and complete installation. Work shall be properly protected during transportation, including the shielding of soft or fragile materials. At completion the delivery site shall be thoroughly cleaned and all tools, equipment, obstructions, or debris present as a result of this work shall be removed by the contractor from the premises.

D. Damage to existing surfaces or equipment caused by the transportation or delivery shall be the responsibility of the contractor. Repairs or replacement shall be performed in a timely manner at the Contractor's expense.

37. STATEMENT OF COMPLIANCE WITH PENNSYLVANIA "PUBLIC WORKS EMPLOYMENT VERIFICATION ACT"

A. The Commonwealth of Pennsylvania "Public Works Employment Verification Act", requires contractors and subcontractors performing work for this Project to complete a form titled "Public Works Employment Verification Form" (the Verification Form) from the Pennsylvania Department of General Services (included in the Project Manual) to certify compliance with federal employment eligibility rules, including verification through the U. S. Department of Homeland Securities E-Verify Program, in order to confirm that employees are authorized to work in the United States. The Verification Form must be submitted by the bidder at the time of submission of the Form of Proposal (the Bid form). As subcontractors are added to the project, they must submit a Verification Form prior to commencing work on the Project. Subcontractors must submit the Verification Form to the Public Body (Owner), not the Prime Contractor. Prime Contractors are required to notify all subcontractors in their contracts of the applicability of the "Public Works Employment Verification Act", with information regarding the use of the E-Verify Program, referencing the web sites www.dgs.pa.gov and www.e-verify.gov where they can obtain a copy of the Verification Form.

END OF SECTION

002213-SUPPLEMENTARY GENERAL CONDITIONS

1. OWNER

   A. The work is to be done for the Marple Newtown School District, Delaware County, Pennsylvania (hereinafter referred to as "District").

2. DEFINITIONS

   A. “Project” – shall mean the Door and Hardware Replacements at Russell Elementary School for Marple Newtown School District, BMA Project No. 26103.00.

   B. "Contract Documents" - shall mean and shall consist of the Agreement, the General Instructions to Bidders, the General Conditions, Supplementary General Conditions, Special Conditions, Specifications, Drawings, Bulletins, Addenda to the Specifications, and Contractor's Bid Proposal, including all modifications thereof subsequently issued as provided by the terms of the contract or as amending the Contract Documents. All of these together form the Contract.

   C. "Board" - shall mean the Board of School Directors of the Marple Newtown School District, Delaware County, Pennsylvania.

   D. "Secretary" - shall mean the Secretary of the Board of School Directors of the Marple Newtown School District.

   E. "Owner" - shall mean the Marple Newtown School District, Delaware County, Pennsylvania.

   F. "Architect" - shall mean Bonnett Medica Associates Incorporated.

   G. "Approval" or "Approved" - shall mean written approval of the Board of School Directors of the Marple Newtown School District.

   H. "Contractor" - shall mean, unless the context indicates otherwise, the principal or prime contractor.

   I. Subcontractor" - shall mean a person, partnership or corporation supplying labor or labor and materials and/or machinery for the Project to a Contractor.

   J. “Supplier” - shall mean a person, partnership or corporation supplying material, products or equipment for the project to a Contractor.

   K. The singular as used herein shall include the plural; the masculine shall include the feminine and the neuter; "Specifications" as used herein shall include Addenda, Supplemental Bulletins; "Material" as used herein shall include equipment and appliances; "Work" as used herein shall include material, labor, supplies, equipment, appliances, machinery and tools.

   L. Every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included herein and if, through mistake or otherwise, any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

M. It is understood and agreed that all time limits are the essence of the contract.

3. LINES, LEVELS, ETC.

A. The Contractor shall, at his own expense, procure datum information, grades, elevations, verify existing construction, etc., at the site, before starting work, otherwise any cost of correction shall be entirely at the contractor's expense.

4. HIRING AND CONDITIONS OF EMPLOYMENT

A. The Contractor agrees to abide and be bound by the laws of the Commonwealth of Pennsylvania, relating to and regulating the hours and conditions of employment.

5. COMPETENT WORKMEN - RATES OF WAGES

A. No person shall be employed to do work under such Contract except competent and first-class workmen and mechanics. No workmen shall be regarded as competent and first-class, within the meaning of this clause, except those who are fully skilled in their respective branches of labor, and who shall be paid not less than such rates of wages and for such hours' work as shall be the established and current rate of wages paid for such hours by employers or organized labor in doing of similar work in the Township of Newtown.

6. ACCIDENT PREVENTION

A. Precaution shall be exercised at all times for the protection of persons (including employees) and property. The safety provisions of applicable laws and building and construction codes shall be observed. Machinery, equipment, and all other hazards shall be guarded or eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law.

7. COOPERATION

A. If this contract is proceeding with another, the contractor shall be responsible for any acts or omissions that interfere with the progress of the work of the other contractor or contractors.

B. Contractor shall carefully examine all Drawings, Plans and Specifications and carry on his work in such manner as not to interfere with or delay the work of other Contractors. If any part of a Contractor's work depends upon the proper execution or results of some other contractor, the former shall inspect and report to the Architect any defects in such work.

C. The Contractor shall furnish and maintain all temporary stairs, ladders, ramps, scaffolds and runways as required for the proper execution of the work.

D. When basement or other rooms are used as shops, store rooms, etc., by the Contractor during the construction, the Contractor will be held responsible for any repairs, patching or cleaning arising from such use.

E. The Contractor shall be responsible for the proper fitting of the work in place, and for coordination in the proper fitting of his work with that of all the Contractors. All work shall be executed only by skilled mechanics.

F. Any discrepancies or inconsistencies found in the Drawings, Plans, and Specifications shall be reported immediately to the Architect for correction or interpretation; all dimensions shown in the Specifications, Drawings, Plans and Supplemental Bulletins must be verified by the contractor at the site before work is begun.

G. The Contractor shall be responsible for phasing his work to allow for the occupancy and operation of the existing facility. Protected exit ways shall be maintained during construction.

8. INDEMNIFICATION AGAINST SUITS

A. The Contractor shall indemnify and save harmless the Owner, the Board, its members and officers, the Architect, his assistants and all others who may act for the Board or the Owner from all suits and actions of every kind, nature and description brought by anyone whatsoever against them or any of them in any manner connected with the Contract here proposed or the work thereunder; provided that nothing herein stated shall be construed to preclude the Contractor from maintaining an action at law for money which may be due him under the Contract.

9. RESPONSIBILITY, RISK, ETC.

A. The Contractor shall be liable for any loss or injury to property, including property of the Owner and all of its officers, agents, and employees, the Architect, and all of its partners, agents and employees, or persons occasioned by his neglect or accident, during the progress of the work, until the same shall have been completed and accepted by the Owner. He shall also assume full responsibility for loss by reason or neglect or violation of any State law or Township ordinances or encroachment upon neighbors.

B. The Contractor shall immediately do anew and/or repair any damage or destruction of material and/or work except as resulting from an Act of God but including any other cause not directly attributable to the negligence of the Owner, at no additional cost to the Owner, the said loss to fall entirely upon the Contractor.

C. The contractor shall properly protect the work in accordance with the custom of the trade and do everything necessary in order that the public, including the Owner, may not suffer any injury to person or property. He shall maintain signal lights and night watchman all night when and where reasonably necessary.

10. CONTRACTOR'S RESPONSIBILITY FOR LIABILITY TO THE PUBLIC, ETC.

A. The Contractor agrees to assume all liability for, and shall and does agree to indemnify and save harmless the said Owner, Board Members and Officers, and Architect, his assistants and all others who may act for the Board or Owner against any and all loss, costs, suits, claims, charges or damages arising from injuries sustained by mechanics, laborers, workmen or by any person or persons whatsoever, to their person or property whether employed in and about the said work, or otherwise by reason of any accidents, damages or injuries, torts or trespasses, happening in and about, or in any way incident to or by reason of the doing of the said work, including costs, counsel fees and all expenses of defense.

11. REVIEW OF WORK

A. All material and workmanship shall be subject to the acceptance of the Architect and the Board both at the site and wherever it is in the course of preparation or manufacture. The Contractor shall make available all facilities necessary for such evaluation. The decision of the Board, upon the recommendation of the Architect shall be final.

B. Upon request, the Contractor shall furnish samples of material even at the sacrifice or destruction of the actual work already performed, provided that the expense involved shall fall upon the Contractor if it develops that the material or the work, or both, does not conform with the specifications.

12. OPERATION OF EQUIPMENT

A. When items of equipment are installed, it shall be the responsibility of the Contractor installing such equipment to operate it as required by the Owner and the Architect for a satisfactory period of time for proper testing of the equipment and instructing the Owner's operating personnel. Contractor furnishing such equipment at his expense shall supply items required for proper testing of equipment.

13. CHANGES AND ALTERATIONS

A. No change in the Contract shall be made without the written approval of the Owner. A request for any change shall be in writing.

B. It is understood and agreed that the Owner may order extra work or make changes by altering, or deduction from, the work. The contract price shall be adjusted accordingly by action of the Owner, provided that all such extra work shall be executed under the terms of the original Contract. Any claim for extension of time caused thereby shall be in writing and shall be adjusted at the time of ordering such change in order to be binding upon the Owner.

C. The amount of compensation to be paid to the Contractor for any changes and alterations, as so ordered, shall be determined as follows:

1. By such applicable unit prices as are set forth in the Contract Documents.

2. If no such unit prices are so set forth, then by a lump sum mutually agreed upon by the Owner and the Contractor, or

3. If no such unit prices are so set forth and if the parties cannot agree upon a lump sum, then by the actual net cost in money to the Contractor of the material and of the wages of applied labor (including premiums for Worker's Compensation Insurance) required for such changes and alterations, plus such rental for plant and equipment (other than small tools) required and approved for such changes and alterations, plus overhead and profit based upon the following:
   a) For the Contractor, for Work performed by the Contractor’s own forces, fifteen percent (15%) of the cost;
   b) For the Contractor, for Work performed by each of his Subcontractors involved, five percent (5%) of the amount due the Subcontractor;
   c) For each Subcontractor or Sub-Subcontractor involved, for Work performed by that Subcontractor’s own forces, fifteen percent (15%) of the cost;
   d) For each Subcontractor, for Work performed by his Sub-Subcontractors

involved, five percent (5%) of the amount due to the Sub-Subcontractor.

Overhead and profit as described above, shall include compensation for all other items, including profit, administration, expenses, overhead, superintendence, insurance (other than Worker's Compensation Insurance), material used in temporary structures, additional premiums upon the Performance Bond of the Contractor, the use of small tools and other cost or expenses.

D. Should the Contractor encounter subsurface and/or other conditions at the site materially differing from those shown on the drawings or indicated in the specifications, he shall immediately give notice to the Architect and the Owner of such conditions before they are disturbed. The architect will investigate the conditions and, if he finds that they materially differ from those shown on the drawings or indicated in the Specifications, he will make such changes in the drawings and/or specifications as he may find necessary. Any increase or decrease of cost resulting from such changes shall be adjusted in the manner provided herein for adjustments for changes and alterations. Contractor is responsible for verification of information furnished to him.

E. Oral instructions given by any of the officers, agents, or employees of the Owner which depart from the Specifications shall not be binding.

14. CLEAN-UP

A. The Contractor shall be responsible for periodic cleaning up of the building and premises. He shall remove all refuse of any kind regardless as to who may have left same except shipping crates and boxes and their packing. No rubbish shall be burned at the site. Contractor shall also be responsible for keeping all property outside of the immediate work areas and material storage areas clean and free from all equipment, materials and debris. If any condition in violation of this requirement persists more than twenty-four (24) hours after notification by the Owner, the Owner shall have the right to abate the condition (without notice to the Contractor responsible) and charge the cost of abatement to the responsible Contractor.

15. TIME OF COMPLETION

A. It is the intent of the Marple Newtown School District to approve and award contracts at a meeting of the Board of Directors on or before April 28, 2026. Following contract awards, a written “Notice to Proceed” will be issued to each prime contractor deemed by the Board to have submitted the lowest cost bid responsive to the requirements of the Contract Documents. At that time, written contracts will be issued to each awarded Prime Contractors. Contracts shall be fully executed and returned to the Architect with the required bonds and insurance certificate within seven (7) calendar days of receipt of the Contracts.

B. Contractors shall conform to the following schedule as determined by the date of contract award described in paragraph 15.A above.

1. Following Notice to Proceed, all prime contractors shall be prepared to mobilize for the Project and be represented at project meetings.

2. For materials and equipment with long lead times, all shop drawings, samples and product literature shall be submitted to the Architect / Engineer no later than May 15, 2026, or earlier as required to achieve Substantial Completion according to the dates

identified below. All other submittals shall be submitted to the Architect / Engineer no later than May 29, 2026, or earlier as required to achieve Substantial Completion according to the dates identified below.

3. Start Dates and Substantial Completion Dates (See Summary and Phase Milestones Below):

   a. Start Date: Monday, June 22, 2026.
   b. Substantial Completion Date: Friday, August 7, 2026.
   c. Prime contractor shall be responsible for coordination with the School District in order to assure that all work is completed in accordance with the project schedule and the provisions of the Project Manual.

4. Final Completion for each phase shall be thirty (30) calendar days from the established date of Substantial Completion for each phase.

16. DELAYS, EXTENSION OF TIME, AND LIQUIDATED DAMAGES

A. Should the Contractor be delayed in the prosecution or completion of the work by the act, neglect, or default of the Owner, the Architect or any employee or agent of either, or of any other Contractor employed by the Owner, upon the work or by any damage caused by strikes, lockouts, fire, unusual delay in transportation, or by reason of shortage of labor and/or material due to any action of the United States Government or any agency thereof, or other unavoidable casualties for which the Contractor is not responsible, or by combined action of workmen which is in no way caused by or resulting from default or collusion on the part of the Contractor, or by delay authorized by the Board upon the recommendation of the Architect or by any cause which the Board shall decide to justify the delay, then the time herein fixed for the completion of the work shall be extended for a period equivalent to the time lost by reason of any or all or all of the causes aforesaid, which extended period shall be determined and fixed by the Board upon the recommendation of the Architect but no such allowance shall be made unless a claim therefore is presented in writing to the Architect within forty-eight (48) hours of the occurrence of such delay.

B. The Contractor shall carry on and complete his work so that the entire construction can be completed on the date of completion.

C. No such extensions of time shall be deemed a waiver by the Owner of its right to terminate the Contract for abandonment or delay by the Contractor as herein provided or relieve the Contractor from full responsibility for performance of his obligations hereunder.

D. All material, equipment and appliances called for or reasonably to be inferred from the Specifications as being required and all work to be done shall be furnished and done complete, in place and ready for use on the date fixed herein as the completion date.

E. Should the Contractor fail to complete the Project on time, the Contractor will be subject to liquidated damages as described in Paragraph 16 of Special Conditions.

17. DEFAULT BY CONTRACTOR

Default by the Contractor shall occur if the Contractor shall:

A. Be adjudged a bankrupt or make an assignment for the benefit of creditors; or

B. Suffer a receiver or liquidator to be appointed for him or for any of his property and not have the same dismissed within twenty (20) days after such appointment, or the proceedings in connection therewith stayed on appeal within said twenty (20) days; or

C. In the opinion of the Board, prosecute the work hereunder with insufficient properly skilled workmen or insufficient machinery and equipment or insufficient materials of proper quality for the prompt completion of said work within the time herein specified; or

D. Improperly perform said work or neglect or abandon it before its completion or unreasonably delay the same so that terms of the contract are being violated or executed in an unworkmanlike manner or in bad faith; or

E. Neglect or refuse to review or again perform such work as may be rejected by the Owner as herein provided; or

F. Fail, in any respect, to prosecute the work with promptness and diligence or fail to complete the work within the time herein specified; or

G. Fail to make prompt payment to persons supplying labor, material or machinery for the work; or

H. Fail or refuse to regard laws, ordinances, or the instructions of the Architect; or

I. Otherwise be guilty of default under any of the terms of the Contract Documents.

18. OWNER'S REMEDIES

A. Should the Contractor default, such default shall be evidenced by a certification thereof by the Architect or upon determination thereof by a resolution of the Board.

B. In the event of the Contractor's default, the Owner shall have the following remedies, without prejudice to any other rights or remedies, which it may have:

1. The Owner shall notify the Contractor, in writing, of such default. If such notice shall be without effect for five days after delivery thereof to the Contractor by Certified mail, the Owner may, in writing, by Certified mail, terminate his employment and his right to proceed, either as to the entire work or, at the option of the Owner as to any portion thereof as to which delay shall have occurred.

2. The Owner upon such default, or after notice of termination is given, may take possession of the work and complete it by contract or otherwise as the Owner deems expedient. The Owner shall have full authority and power immediately to let a new Contract or Contracts for the completion of said work. It may select anyone as its new Contractor at such price or prices as it may deem proper.

3. The contractor shall not be entitled to receive the retained percentage or any further payment until the work is finished.

4. If the unpaid balance of the compensation to be paid the Contractor shall exceed the expense of so completing the work (including compensation for additional managerial, administrative and inspection services and any damages for delay), such excess shall be paid to the Contractor.

5. If such expenses, including as aforesaid, shall exceed such unpaid balance, the Contractor and his sureties shall be liable to the Owner for such excess.

6. If the right of the Contractor to proceed with the work is so terminated, the Owner may take possession of and utilize in completing the work, such material, appliances, supplies, plant and equipment as may be on the site of the work and necessary therefore.

7. The Owner shall have full authority and power, in any event, to purchase such materials, appliances, supplies, tools and machinery, and to employ such workmen as, in the sole opinion of the Owner shall be required for the completion of said work at the expense of the Contractor.

8. The Owner shall hold Contractor and his sureties liable for any damage, which may be suffered.

9. If the Board does not so terminate the right of the Contractor to proceed, the Contractor shall continue the work, the Owner always reserving to itself all of its rights and remedies.

19. CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

A. If the work shall be stopped by order of the Court or any other public authority, for a period of three (3) months without act of fault of the Contractor or of any of his agents, servants, employees, or subcontractors, including suppliers, the Contractor may, upon ten (10) days' notice to the Owner discontinue his performance of the work, and/or terminate the Contract, in which event the liability of the Owner to the Contractor shall be determined as provided herein, except that the Contractor shall not be obligated to pay the Owner any excess of the expense of completing the work over the unpaid balance of the compensation to be paid the Contractor hereunder.

20. DISTRICT'S RIGHT TO OCCUPY PREMISES

A. Portions of the existing facility may be occupied by the School District. The contractor shall phase his work accordingly and allow for proper exiting of occupants.

B. On or after the stipulated completion date of the contract work or the established completion date of any part thereof, the Owner shall have the right to make use of any completed portion of the work, but such use shall not constitute in itself an acceptance of the work or any portions thereof.

C. Prior to such use, however, the Owner and the Architect shall make an evaluation of the portion or portions of the work to be used to determine if it is in conformity with the contract.

D. If the portions of the work to be used are completed and accepted prior to their use, the Contractor shall not be liable for any subsequent damage due to occupancy or use of the accepted portion or portions except as covered under the Maintenance Bond. Contractor shall remain responsible, however, for any damage caused in the used portion by his personnel.

E. Under these conditions, the Owner will reimburse the Contractor for the cost of repairs of only those damages directly traceable to the Owner's occupation of the portions in question. After acceptance, the provisions of the Maintenance Bond shall apply.

F. In the event that the portions of the work intended to be used by the Owner are deemed to be too far from completion by the agreed completion date, or if their use would delay completion, the Contractor shall so notify the Owner with copy to the Architect who shall then make arrangements to use other facilities (away from new construction or existing areas being altered) for storage and/or human occupancy use with the Contractor bearing cost as specified under "Liquidated Damages."

21. FINAL ACCEPTANCE

A. Contractor shall perform and complete his work according to the Contract Documents without fault or defect of any kind. In absence of more specific directives, and insofar as applicable, the work shall:

1. be completed in a first-class manner;
2. be placed in a thoroughly clean and unmarred condition;
3. be checked out in a step-by-step manner to ascertain that all fastenings, controls, valves, safety devices, operating devices and other required appurtenances have been provided in accordance with the Contract Documents;
4. be free of previously condemned or rejected parts and be properly restored to the extent thereof; and
5. be balanced for proper operation wherever adjustments for balancing may exist in the work.

B. When this condition of completion exists, Contractor shall request final review by the Architect who will visit the site and make observation. Where any inadequacies are encountered in the work, they will be noted on a punch list. Contractor shall then remedy each and every punch list item in a manner directed and make the entire work conform to the requirements of Contract Documents. Contractor shall then request inspection of all punch list items and Architect will revisit site and make a final review.

C. At the final review any items or work not then acceptable that have been recorded on punch list at time of prior inspection require Contractor to expedite correction of such items or work, and shall cause certificate of final payment to be withheld until the entire project is completed and acceptable. In addition, Contractor shall be responsible for any added expense of Owner, such as cost of additional review by the Architect, expenses in connection therewith; such cost and expenses shall be deductible by the Owner from amount of final payment. Evidence of such costs, if charged to Contractor, will be given by Owner to Contractor.

22. PAYMENT

A. On a monthly basis, the Owner shall make partial payment to the Construction contractors for the work performed during the preceding calendar month. The initial payment approval will be contingent upon receipt of an approved Construction Schedule.

B. Such payment shall be based on an estimate of such work and requisition for payment to be submitted using the AIA Document G702/G703 Application and Certificate for Payment in triplicate, by the Contractor to **the Architect** as directed. Upon request of the Owner or Owner's representatives, the Contractor shall be required to submit with each Application for Payment, a Contractor's Affidavit of Partial Release of Liens. Applications for Payment submitted without the requested Partial Release of Liens documentation shall not be processed until the Contractor provides such documentation. The estimate and requisition must be accepted by the Architect before it will be paid by the Board.

C. The Board shall retain a percentage of the amount of each such estimate until final completion and acceptance of all of the work covered by this Contract.

D. The acceptance by the Contractor of the payment for the final certificate shall constitute a waiver of all claims against the Owner under or arising out of this Contract.

E. Within the period of specific or general guarantees, no certificate given or payment made under the Contract or partial or entire occupancy of the building by the District shall be construed as an acceptance of defective work or improper materials or as condoning any negligence or omission.

F. The Owner at final settlement, shall receive written guarantees from the Contractor and the subcontractors whose special branches call for guarantees in the Specifications. Said guarantees to be countersigned by the Contractor and to be fulfilled by him in the event the subcontractor fails to do so.

G. The Contractor shall pay:
   1. For all transportation and utility service on a monthly basis for the calendar month following that in which such services are rendered.
   2. For all material, tools, and other expendable equipment, to the extent of ninety percent (90%) of the cost thereof, on a monthly basis for the calendar month following that in which such material, tools and equipment are delivered at the site of the project, and the balance of the cost thereof not later than the thirtieth (30th) day following the completion of that work in or on which such material, tools and equipment are incorporated or used, and
   3. To each of his subcontractors, not later than the fifth (5th) day following each payment to the Contractor the respective amounts allowed the Contractor on account of the work performed by his subcontractors, to the extent of each such subcontractor's interest therein.

H. Payments to the contractor will be made in amounts commensurate with the portion of the work completed, provided that ten percent (10%) of each payment will be retained until the work of the project is fifty percent (50%) complete. Upon satisfactory performance and progress of the work and submission of written request by the Contractor accompanied by a completed, signed and notarized Consent of Surety to Reduction in or Partial Release of Retainage (AIA Document G707A), the District may upon approval of the Board at 50% completion of the work, reduce the amount of retainage to five percent (5%) of all payments

previously made and five percent (5%) of each payment made through final acceptance of the work. The Owner shall pay all retainage upon final acceptance of the work.

I. Payments will be made for material suitably stored on the site which is necessary for the prosecution of the work in the same proportion and in the same manner as provided above.

23. RETENTION OF MONIES BY REASON OF CLAIMS FOR WAGES AND MATERIAL

A. It is also expressly understood and agreed that the Owner may retain monies due to the Contractor in the event that it shall appear that such Contractor has failed to provide for and to pay any proper claims or bills for wages, materials, claims, damages, or otherwise, the prompt and faithful payment of which by the Contractor is provided for in the Contract or the said specifications; such monies may be held by the Owner to better secure such performance, or may be paid on the Contractor's account to the parties entitled hereto, which payment or payments shall constitute a full acquittance, accord and satisfaction of all liability of the Owner to the Contractor therefore, to the amount of such payments.

24. CORRECTION OF WORK AFTER FINAL PAYMENT

A. Neither the final certificate nor payment nor any provision in the Contract Documents shall relieve the Contractor of responsibility for faulty materials or workmanship, and, unless otherwise specified, he shall remedy any defects due thereto and pay any damage to other work resulting therefrom, which shall appear within a period of two (2) years from the date of final acceptance of the Owner. The Board shall give notice of observed defects with reasonable promptness. The Architect shall decide all questions arising under this clause.

25. NO EXTRA COMPENSATION

A. The Contractor agrees that he has judged for and satisfied himself as to the character of the work to be done and materials to be furnished, and other circumstances affecting the cost of performance of the work. He agrees that he will not ask, demand, sue for or recover extra compensation for any materials furnished or work done under his Contract, beyond the amount payable for the classes of work or kind of material specified by the Specifications and Drawings actually performed and furnished by him at the price therefor agreed upon and fixed.

B. There shall be no cash allowances.

26. ASSIGNMENT OF CONTRACT

A. The bidder agrees that if the Contract is awarded to him he will not assign or transfer the Contract, or assign or transfer in part any rights or privileges which may accrue under the terms of the Contract, or to assign any money which may become due to the said Contractor thereunder.

27. OTHER CONTRACTS

A. The Owner reserves the right to let other Contracts and to install equipment and furniture in the building at any time during the construction of the building without in any way affecting this Contract.

28. RIGHT OF BOARD TO CONTEST ESTIMATES, ETC.

A. Nothing contained in the Contract Documents shall be construed to preclude the Board from contesting the estimates or certificates of its Architect, officers or agents, or any claim of the Contractor under the Contract Documents or under such estimates or certificates; but the Board shall be at full liberty to raise every legal defense as to the character, quality, and quantity of the said work and material and as to the time and manner in which the same shall be furnished and done notwithstanding the certificates or approval of any Architect, officer or agent of the Owner.

29. RELEASE OF LIENS

A. Upon completion of the work and before final payment is made the Contractor shall furnish to the Owner a complete Release of Mechanics Liens signed by the Contractor and all of his subcontractors and materialmen. Failure of the Contractor to furnish such Release of Liens shall, at the discretion of the Owner, be sufficient reason to withhold the final payment until the Release is furnished.

30. GUARANTEE OF WORK

A. Except as otherwise expressly provided in the Contract Documents, the Contractor unqualifiedly guarantees all work, for a period of one (1) year following the date of final completion and acceptance of the work, against all defects resulting from the use of materials, equipment or workmanship that are inferior, or defective, or not in accordance with the Contract Documents. Upon receiving written notice of such defects from the Architect or Owner, the Contractor shall, at his expense and risk, promptly and without expense to the Owner, correct all such defects and all damages to the remainder of the work and to other property of the Owner or others resulting therefrom. Neither the final certificate, nor payment, nor any provision in the Contract Documents shall relieve the Contractor of responsibility under this Article. The Owner shall give notice of observed defects with reasonable promptness.

31. GENERAL CONDITIONS OF THE CONTRACT

A. The General Conditions of the Contract for Construction is hereby amended as follows: Sections 3.8, 3.8.1, 3.8.2, 3.8.2.1, 3.8.2.2, 3.8.2.3, 3.8.3, 15.4, 15.4.1, 15.4.1.1, 15.4.2, 15.4.3, 15.4.4, 15.4.4.1, 15.4.4.2, and 15.4.4.3 are deleted from General Conditions A.I.A. Document A201. The word “Arbitration” is deleted from Sections 8.3.1, 11.3.10, 13.1 and 15.3.2 as a method of Dispute Resolution. The Contract shall be governed by the law of the place where the Project is located and the method of Binding Dispute Resolution for any claim not resolved by mediation pursuant to Section 15.3 of the General Conditions of the Contract for Construction shall be litigation in a court of competent jurisdiction in Delaware County, Pennsylvania.

END OF SECTION

003119-SPECIAL CONDITIONS

These Special Conditions shall apply to the work as a whole, and to each branch or subdivision and subcontractor for same should the work be divided. Subcontractors shall have access to read a copy of these Special Conditions and no Contractor or arrangements with them shall be such as to conflict herewith. Any requirements contained in the General Conditions which differ from any requirements contained in these "Special Conditions" shall be superseded by the requirements of these "Special Conditions."

1. ARRANGEMENT OF THE SPECIFICATIONS

The Contractor is advised that the arrangement of the technical sections of the Specifications is furnished for convenience only. The allocation of the items of work between his Subcontractors is entirely the responsibility of the Contractor.

2. SAFETY DURING CONSTRUCTION

A. The Contractor shall enforce suitable rules and provide the required guards, and protective devices for the safe prosecution of the work and for the safety and health of the men employed in it and the public in general, both inside and outside the limit of Contract. The Contractors are responsible for compliance with the Federal Occupational Safety and Health Act of 1970.

B. The Prime Contractor and all Subcontractors shall immediately report all accidents, injuries, or health hazards to the Owner and Architect, or their designated representatives, in writing.

3. SUBSTITUTIONS OF MATERIAL

Bidders wishing to obtain approval on items other than those specified by name shall submit their request to the Architect not later Friday, March 27, 2026. No substitutions will be considered thereafter.

All such requests shall be in accordance with the terms and conditions of the Contract Documents. Prior approval submittals shall be reviewed as set forth herein.

A. The burden of proof of performance equality and the completeness of this submittal is the responsibility of the Bidder.

B. The Architect shall not be required to complete the submittal, that is, select from options or models and lines of products. The bidder is responsible to clearly indicate this information.

C. The Architect shall not be required to seek information from manufacturer's literature on file in the office, or from other sources or locations. The Bidder is responsible to provide all information required for the Architect's review.

D. The product shall be equal, or better in those features and performance, which the specified product provides.

E. Acceptance by the Architect will be in the form of an Addendum to the Specifications issued to all prospective Bidders indicating that the additional brand or brands are acceptable as equal to those specified so far as the requirements of the project are concerned.

F. If the Bidders do not elect to obtain prior acceptance during the time so specified, they have thereby evidenced their intention and are bound to provide all those articles and brand names stated in the Specifications.

4. DAMAGE TO PROPERTY

Should any direct or indirect damage be done to any public or private property of any kind or to any structure, materials, equipment of fixtures, resulting from any act or omission on the part of any of the Contractors, his Subcontractors or employees or agents, the Contractor shall, at his/her own cost and expense, restore the same equal to its condition before the said damage was done by repairing, replacing, rebuilding as may be required by the Owner, or shall make good such damage in a manner satisfactory to the Owner, the Architect, or the Owner of the damaged property.

5. CLEAN-UP

The Contractor shall at his/her own cost and expense, shall remove all debris from the site to the satisfaction of the Owner and Architect. The work areas shall be kept free of debris by removing waste products/ materials on a daily basis.

6. DRAWINGS AND SPECIFICATIONS FURNISHED TO CONTRACTORS

Following the execution of their respective contracts, Contractors shall be entitled to receive from the Architect, without charge, Contract Drawings and Specifications as follows:

A. Prime Contractors – Drawings and Specifications will be available in electronic format (Portable Document Format) only on the Website www.box.com where the Bid Documents are accessed.

7. STRUCTURES, MATERIALS, ETC., ON THE SITE

All materials, trees, equipment and structures of any kind now on the site that do not interfere with the performance of the work required hereunder shall be left in place, and shall remain the property of the Owner unless otherwise specified. All live, healthy trees, shrubs, etc., not specified to be removed and not interfering with the removal or installation of new work required hereunder, shall be protected against damage as directed.

8. TEMPORARY ELECTRICAL SUPPLY

A. The Electrical Contractor shall be responsible to supply electricity, if needed, to the work area from a source to be provided by the Electrical Contractor. The Owner shall pay usage costs for electricity used.
B. All PECO Energy costs associated with the temporary service installation for construction trailers shall be the responsibility of the Electrical Contractor.
C. All temporary service usage costs for the construction trailers shall be the responsibility of the General Contractor.

9. TEMPORARY WATER SUPPLY

The Contractor shall be responsible to supply water, if needed, to the work area from a source to be provided by the Contractor. The Owner shall pay the cost of all water used.

10. WARRANTY

Supplementing any specific guarantee or warranties provided for in any other provision of this contract for the work to be performed hereunder; each Contractor covenants and agrees to remedy without cost to the Owner, any defect which may develop within one (1) year from the date of completion and acceptance of the work performed under this contract, or damage which may be caused by such defects, provided such defects, in the judgment of the Owner, are caused by inferior materials and workmanship. The warranty period shall commence on the date of substantial completion or in absence thereof the date of approval by the Architect of the contractor's final application and certificate for payment.

11. OPERATIONS AND STORAGE AREAS

All operations of the Contractor (including storage of materials) shall be confined to areas authorized or approved by the Owner. No unauthorized or unwarranted entry upon, passage through, or storage or disposal of material shall be made upon area not so authorized or approved. The Contractor responsible shall be liable for any and all damage caused by him to such area.

12. TEMPORARY STORAGE SHEDS

Each Contractor may provide and later remove and dispose of such temporary storage sheds as are required to protect and safeguard his and his Subcontractor's materials, tools, and equipment. The location of storage sheds shall be subject to the Owner's approval. All materials shall be stored in locations as approved by the School District.

13. SCAFFOLDS, LADDERS, RUNS AND HOISTS

The Contractor shall construct and maintain such temporary scaffolds, ladders, runs, hoists, centering, shoring, and other facilities as required to perform the work under his contract.

14. TIME FOR COMMENCEMENT AND COMPLETION

The work shall be completed as indicated in Article 15 of the Supplementary General Conditions. If it becomes necessary in the opinion of the Architect or Owner to post-pone the project or any phase of the work, then the Owner or Architect will authorize an extension of the contract time. An extension of the contract time shall not be caused for an increase in the Contractor's price.

15. GENERAL SCOPE OF WORK

It is the intent and purpose of these specifications and the accompanying drawings to cover and include all materials, machinery, apparatus, delivery, taxes, insurance, and labor necessary to properly install, equip, adjust, and put into perfect function the respective portions of the installation specified and to so interconnect the various items and sections of the work (new and existing) as to form a complete and properly finished whole system.

Any equipment, accessories, materials, apparatus, machinery and items not mentioned in detail, and labor not hereinafter specifically mentioned or inferred, which may be found necessary in the opinion of the Architect, to complete or perfect any portion of an installation, shall be furnished without extra cost to the Owners by the Contractor. The drawings and specifications indicate the general constituents of an assembly or system and may not indicate all components necessary to

complete an assembly or system. The contractor is responsible to provide complete assemblies and/or systems without additional cost to the Owner.

16. LIQUIDATED DAMAGES

The Owner will suffer damages if the Construction Contract(s) is not complete as scheduled in the Time for Commencement and Completion. The Contractor and Contractor's Surety Company shall be liable for and shall pay to the Owner the sum **of $500.00** per day as Liquidated Damages for each calendar day of delay until the Construction Contract is complete.

"Substantial Completion" shall be completion of Contractor's obligations hereunder such as to allow Owner to occupy all portions, rooms, and spaces within the building or on the site in a normal fashion for the intended purpose of conducting the normal and customary activities of the intended purpose of the building.

It is agreed by the parties hereto that the liquidated sums and actual damages provided for by this Paragraph shall be paid by Contractor to Owner within thirty (30) days following written demand made by Owner or its agent to Contractor, and that such damages shall be in the nature of agreed-to damages and not penalties. Should Contractor fail to pay the sums as provided for in this Paragraph, Owner shall have the right to deduct the same amount from the contract price.

17. SAFE WORK ENVIROMENT

A. Statement of Purpose.

It is the intent of the School District to provide a safe work environment for all individuals either directly or indirectly involved in all renovation and construction projects. This includes alcohol-free and drug-free job sites.

B. Prohibition.

Possession, distribution, and/or use of alcohol or alcoholic beverages on School District property are prohibited. Possession, distribution, and/or use of any other drug or controlled substance, except under and in accordance with the institution of a licensed physician, is prohibited. Additionally, and notwithstanding the forgoing, no individual shall be permitted on School District property while under the influence of alcohol, other drug(s), and/or controlled substance(s).

C. Testing.

1. The School District may require any individual employed or engaged in the project, either directly or indirectly, to submit to drug and/or alcohol testing on the basis of reasonable suspicion.

2. The School District may require any individual employed or engaged in the project, either directly or indirectly, to submit to drug and/or alcohol testing based on involvement in any accident.

3. The School District may require any individual employed or engaged in the project, either directly or indirectly, to submit to random drug and/or alcohol testing.

4. All testing shall be performed at a laboratory or medical testing site to be designated by the School District.

5. All expenses associated with testing under subparagraph 17C.1and 17C.2 shall be paid by prime contractor by virtue of which the individual is employed or engaged in the project, either directly or indirectly.

6. All expenses associated with the testing under subparagraph 17.C.3 shall be paid by the School District.

D. Exclusion from Job Site

Any individual who refuses to cooperate with or submit in accordance with the provisions of paragraphs 17B and/or 17C above or who tests positive for alcohol or drugs shall be excluded from the job site at the discretion of the School District

Exclusion of any individual(s) from the job site or work interrupt(s) caused by testing or the consequences(s) thereof shall be the sole responsibility of the prime contractor for whom the individual(s) is/are employed or engaged, either directly or indirectly.

18. DIGITAL FILES POLICY:

A. AutoCAD files of the project floor plans shall be made available to Prime Contractors contingent upon the following stipulations and procedures.

1. AutoCAD files to be made available shall consist of the basic project floor plan only. Dimensions, construction details, notes, schedules, reflected ceiling plans, etc. will not be included with the file.
2. No other contract document drawing files shall be provided.
3. Prime Contractors interested in obtaining this file shall submit a fully completed and executed “Digital File Request Form” to the attention of the Bonnett Associates Incorporated Project Manager. A copy of this form has been provided in the Project Manual for Prime Contractor use.
4. Incomplete Digital File Request Forms shall not be processed until all information has been provided.
5. Digital File Request Forms shall only be submitted by Prime Contractors following receipt of a fully executed Form of Agreement between the Owner and Contractor. Digital files shall not be made available to bidders during the bid phase of the project.

END OF SECTION

SEE ADDENDUM 1

004115-FORM OF PROPOSAL
GENERAL CONSTRUCTION

To: Marple Newtown School District
Administration Building
40 Media Line Road
Newtown Square, PA 19073

This Proposal is submitted in accordance with your advertisement inviting proposals to be received until **2:00 P.M. on Tuesday, April 7, 2026,** for all labor, equipment and material required for the completion of:

GENERAL CONSTRUCTION
FOR DOOR AND HARDWARE REPLACEMENTS AT RUSSELL ELEMENTARY SCHOOL
2201 SPROUL ROAD, BROOMALL, PA 19008
FOR THE MARPLE NEWTOWN SCHOOL DISTRICT

in the Marple Newtown School District, Delaware County, PA.

Having carefully examined the Contract Documents dated **March 13, 2026**, comprising the Drawings, Specifications and all Documents bound therewith, including Instructions to Bidders, Special Conditions, Supplementary and General Conditions, together with all Addenda thereto, entitled:

DOOR AND HARDWARE REPLACEMENTS AT RUSSELL ELEMENTARY SCHOOL

as prepared by Bonnett Medica Associates Incorporated and having visited the site and being familiar with the various conditions affecting the work, the undersigned herein agrees to furnish all material, perform all labor and do all else necessary to complete the contract in accordance with the said Contract Documents for the Contract amounts stipulated in this Form of Proposal.

Whereas the Marple Newtown School District desires to ascertain the cost for DOOR AND HARDWARE REPLACEMENTS AT RUSSELL ELEMENTARY SCHOOL herein above, the bidder shall stipulate the contract amount (Base Bid) for the work as described herein. The Marple Newtown School District shall have the right to award a contract to any contractor for the building based upon the contract amount stated herein.

A. Base Bid.

_____ Dollars $_____

B. Alternates.

1. **ADD Alternate No. 1 (GC)**: State the dollar amount to be added to the Base Bid to provide scope associated with Alternate No. 1in accordance with the Contract Documents.

ADD: _____ Dollars $_____

2. **ADD Alternate No. 2 (GC)**: State the dollar amount to be added to the Base Bid to provide scope associated with Alternate No. 2 in accordance with the Contract Documents.

ADD: _____ Dollars $_____

3. **ADD Alternate No. 3 (GC)**: State the dollar amount to be added to the Base Bid to provide scope associated with Alternate No. 3 in accordance with the Contract Documents.

ADD: _____ Dollars $_____

C. Unit Prices:

Bidder proposes following Unit Prices, which shall be applied for additional or deleted Work as requested by Owner. Items shall be provided completely installed and shall be in full accordance with Specifications herein written. Following Unit Prices shall be inclusive of all Work installed including: material, labor, permits, delivery, overhead, profit, and taxes. Prices shall be listed for each item. Where changes are made to Work shown on Contract Drawings, Unit Prices shall apply only to net differences between original Work and new Work. Unit prices identified as Unit Allowance shall be provided in accordance with Section 012750 Quantity Allowances. These values shall be multiplied by the corresponding quantities specified in Section 012750 Quantity Allowances to establish costs that shall be included in the Base Bid.

1. Unit Allowance G.1 General Laborer, per man hour. $_____
2. Unit Allowance G.2 Journeyman Painter Class 2 Labor, per man hour. $_____
3. Unit Allowance G.3 Carpenter Journeyman Labor, per man hour. $_____

D. Addenda:

The undersigned hereby acknowledges receipt of the Addenda (If none were issued, so indicate).

Addenda Number	Dated
_____	_____
_____	_____
_____	_____

The undersigned acknowledges that he or a representative of the business organization submitting the proposal attended the pre-bid conference on _____, 2026. If pre-bid conference was not attended, the undersigned acknowledges that he or a representative of the business organization submitting the proposal did in fact visit and review the project field conditions on _____, 2026.

FORM OF PROPOSAL (Continued)

The undersigned acknowledges that the Bid Bond or other acceptable Bid Guarantee furnished with this Proposal will be forfeited or retained by the Owner as liquidated damages if the undersigned shall fail to furnish a properly executed Performance Bond and a properly executed Payment Bond, as required by the Contract Documents after receiving notice from Marple Newtown School District, prior to the award of the Contract or this proposal or any part thereof is accepted by the School District and the undersigned shall fail to furnish evidence of required insurance coverage, upon request, and execute the Agreement as required by the Contract Documents. Should the School District fail to make an award on this Project through no fault or failure on the part of the bidder, and if a check is provided, then the Owner shall return said check.

The undersigned acknowledges that all work will be completed in accordance with the schedules stated in Paragraph 15 of the Supplementary General Conditions as included in the Project Manual.

The undersigned agrees to enter a written agreement with the Marple Newtown School District on a form of agreement consistent with the terms of the Contract Documents and acceptable to the School District.

The undersigned hereby certifies that this proposal is genuine and not a sham or collusive, or made in the interest or in behalf of any person, firm or corporation not here named, and that the undersigned has not, directly or indirectly, induced or solicited any other bidder to submit a sham bid or any other person, firm or corporation to refrain from bidding, and the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other bidder.

Corporate Contractor Sign Here

_____ By: _____
Official Address President or Vice President

Corporate Seal

_____ Attest: _____
Corporate Secretary or Assistant Secretary

Partnership Contractor Sign Here

_____ By: _____
Official Address

By: _____

_____ By: _____

Witness: _____

Individual Contractor Sign Here

_____ By: _____
Official Address

_____ Witness: _____

Date: _____

NOTE: Typewritten or stamped signature will not be accepted. Signatures must be handwritten in ink.
No Bidder shall alter the Proposal Form if so it is reason for disqualification.
No Bidder may withdraw his bid for a period of Sixty (60) days after the date set for the opening thereof.

006000- Non-Collusion Affidavit

CONTRACT/BID NO. _____

State of _____

County of _____ §

I state that I am _____ of _____
(Title) (Name of Firm)
and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

(1) The price(s) and amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder.

(2) Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.

(3) No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

(4) The bid of any firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.

(5) _____, its affiliates, subsidiaries, officers, directors
(Name of Entity)
and employees are not currently under investigation by any governmental agency and have not in the last four years been convicted or found liable for any act prohibited by State or Federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows:

I state that _____ understands and acknowledges that the above
(Name of Entity)
representations are material and important and will be relied on by the Marple Newtown School District in awarding the contract(s) for which this bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from the Marple Newtown School District of the true facts relating to the submission of bids for this contract.

_____
(Entity Name)

_____
(Signature)

_____
(Position)

SWORN TO AND SUBSCRIBED BEFORE ME
THIS _____ DAY OF _____, 2026.

_____
Notary Public

_____
Commission Expires

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project Name:	Door and Hardware Replacements at Russell Elementary School
General Description:	Replace doors and hardware in Russell Elementary School
Project Locality	Broomall
Awarding Agency:	Marple Newtown School District
Contract Award Date:	4/28/2026
Serial Number:	26-01942
Project Classification:	Building
Determination Date:	2/27/2026
Assigned Field Office:	Philadelphia
Field Office Phone Number:	(215)560-1858
Toll Free Phone Number:	
Project County:	Delaware County

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	5/1/2025		$60.84	$48.71	$109.55
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2024		$36.71	$19.13	$55.84
Boilermakers	1/1/2024		$52.10	$35.72	$87.82
Bricklayer	5/1/2025		$50.00	$32.57	$82.57
Carpenter - Chief of Party (Surveying & Layout)	5/1/2025		$54.59	$29.02	$83.61
Carpenter - Instrument Person (Surveying & Layout)	5/1/2025		$47.47	$29.02	$76.49
Carpenter - Rodman (Surveying & Layout)	5/1/2025		$23.74	$20.62	$44.36
Carpenters	5/1/2024		$45.72	$29.02	$74.74
Carpenters	5/1/2025		$47.47	$29.02	$76.49
Cement Finishers & Plasterers	5/1/2022		$38.57	$32.39	$70.96
Cement Masons	5/1/2024		$46.70	$32.46	$79.16
Cement Masons	5/1/2025		$48.70	$32.46	$81.16
Dockbuilder, Pile Drivers	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder, Pile Drivers	5/1/2026		$56.98	$37.99	$94.97
Dockbuilder/Pile Driver Diver	5/1/2025		$64.35	$41.74	$106.09
Dockbuilder/Pile Driver Diver	5/1/2026		$66.54	$41.74	$108.28
Dockbuilder/pile driver tender	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder/pile driver tender	5/1/2026		$56.98	$37.99	$94.97
Drywall Finisher	5/1/2025		$40.14	$32.35	$72.49
Electricians	5/1/2024		$69.58	$45.66	$115.24
Electricians	5/1/2025		$70.97	$47.27	$118.24
Elevator Constructor	1/1/2025		$71.85	$45.77	$117.62
Elevator Constructor	1/1/2026		$74.86	$46.86	$121.72
Floor Coverer	5/1/2025		$51.67	$31.69	$83.36
Floor Coverer	5/1/2026		$52.84	$32.86	$85.70
Glazier	5/1/2024		$48.00	$37.50	$85.50
Glazier	5/1/2025		$49.96	$38.34	$88.30
Interior Finish	5/1/2023		$34.60	$25.80	$60.40
Iron Workers (Bridge, Structural, Ornamental, Precast)	7/1/2024		$53.20	$45.01	$98.21
Iron Workers (Riggers)	7/1/2024		$44.64	$34.39	$79.03
Iron Workers (Riggers)	7/1/2025		$44.77	$36.27	$81.04
Iron Workers (Rodman/Reinforcing)	7/1/2024		$47.70	$34.77	$82.47
Iron Workers (Rodman/Reinforcing)	7/1/2025		$47.80	$36.65	$84.45
Laborers (Class 01 - See notes)	5/1/2024		$35.85	$26.00	$61.85
Laborers (Class 01 - See notes)	5/1/2025		$37.25	$26.10	$63.35
Laborers (Class 02 - See notes)	5/1/2024		$39.40	$27.55	$66.95
Laborers (Class 02 - See notes)	5/1/2025		$41.00	$27.70	$68.70
Laborers (Class 03 - See notes)	5/1/2024		$36.27	$26.18	$62.45
Laborers (Class 03 - See notes)	5/1/2025		$37.67	$26.28	$63.95
Laborers (Class 04 - See notes)	5/1/2024		$36.27	$26.18	$62.45
Laborers (Class 04 - See notes)	5/1/2025		$37.67	$26.28	$63.95
Laborers (Class 05 - See notes)	5/1/2024		$35.85	$26.00	$61.85
Laborers (Class 05 - See notes)	5/1/2025		$37.25	$26.10	$63.35
Landscape Laborer	5/1/2024		$30.70	$24.23	$54.93

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Landscape Laborer	5/1/2025		$32.15	$24.30	$56.45
Marble Finisher	5/1/2025		$41.17	$30.75	$71.92
Marble Mason	5/1/2023		$47.20	$31.95	$79.15
Mason Tender, Cement	5/1/2023		$35.02	$25.98	$61.00
Millwright	5/1/2025		$57.39	$35.81	$93.20
Millwright	5/1/2026		$60.20	$35.81	$96.01
Operators (Building, Class 01 - See Notes)	5/1/2025		$54.52	$34.49	$89.01
Operators (Building, Class 01 - See Notes)	5/1/2026		$55.67	$35.34	$91.01
Operators (Building, Class 01A - See Notes)	5/1/2025		$57.52	$35.38	$92.90
Operators (Building, Class 01A - See Notes)	5/1/2026		$58.68	$36.22	$94.90
Operators (Building, Class 02 - See Notes)	5/1/2025		$54.27	$34.42	$88.69
Operators (Building, Class 02 - See Notes)	5/1/2026		$55.43	$35.26	$90.69
Operators (Building, Class 02A - See Notes)	5/1/2025		$57.29	$35.29	$92.58
Operators (Building, Class 02A - See Notes)	5/1/2026		$58.44	$36.14	$94.58
Operators (Building, Class 03 - See Notes)	5/1/2025		$50.18	$33.22	$83.40
Operators (Building, Class 03 - See Notes)	5/1/2026		$51.34	$34.06	$85.40
Operators (Building, Class 04 - See Notes)	5/1/2025		$49.88	$33.13	$83.01
Operators (Building, Class 04 - See Notes)	5/1/2026		$51.04	$33.97	$85.01
Operators (Building, Class 05 - See Notes)	5/1/2025		$48.16	$32.62	$80.78
Operators (Building, Class 05 - See Notes)	5/1/2026		$49.32	$33.46	$82.78
Operators (Building, Class 06 - See Notes)	5/1/2025		$47.17	$32.33	$79.50
Operators (Building, Class 06 - See Notes)	5/1/2026		$48.34	$33.16	$81.50
Operators (Building, Class 07A- See Notes)	5/1/2025		$66.26	$39.55	$105.81
Operators (Building, Class 07A- See Notes)	5/1/2026		$67.73	$40.48	$108.21
Operators (Building, Class 07B- See Notes)	5/1/2025		$65.97	$39.46	$105.43
Operators (Building, Class 07B- See Notes)	5/1/2026		$67.44	$40.39	$107.83
Painters Class 1 (see notes)	5/1/2024		$42.97	$34.11	$77.08
Painters Class 1 (see notes)	5/1/2025		$44.38	$34.55	$78.93
Painters - Line Stripping	12/1/2024		$44.12	$27.91	$72.03
Painters - Line Stripping	12/1/2025		$45.12	$29.41	$74.53
Painters Class 4 (see notes)	5/1/2024		$45.06	$34.11	$79.17
Painters Class 4 (see notes)	5/1/2025		$46.47	$34.55	$81.02
Plasterers	5/1/2024		$39.88	$33.08	$72.96
plumber	5/1/2024		$67.53	$38.31	$105.84
plumber	5/1/2025		$70.53	$39.46	$109.99
Pointers, Caulkers, Cleaners	5/1/2023		$48.80	$30.70	$79.50
Pointers, Caulkers, Cleaners	5/1/2025		$51.35	$31.80	$83.15
Roofers (Composition)	5/1/2024		$44.13	$34.77	$78.90
Roofers (Shingle)	5/1/2024		$34.35	$22.20	$56.55
Roofers (Slate & Tile)	5/1/2024		$37.35	$22.20	$59.55
Sheet Metal Workers	5/1/2024		$59.22	$50.56	$109.78
Sheet Metal Workers	5/1/2025		$62.62	$52.17	$114.79
Sign Makers and Hangars	7/15/2024		$32.32	$25.82	$58.14
Sign Makers and Hangars	7/15/2025		$33.48	$26.41	$59.89

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Sprinklerfitters	1/1/2023		$62.23	$31.99	$94.22
Sprinklerfitters	5/1/2025		$70.37	$34.85	$105.22
Steamfitters	5/1/2024		$70.32	$43.09	$113.41
Steamfitters	5/1/2025		$72.52	$44.89	$117.41
Stone Masons	5/1/2023		$47.20	$31.95	$79.15
Stone Masons	5/1/2025		$50.00	$32.80	$82.80
Terrazzo Finisher	5/1/2023		$43.75	$27.86	$71.61
Terrazzo Finisher	5/1/2025		$45.61	$29.41	$75.02
Terrazzo Grinder	5/1/2023		$44.02	$27.86	$71.88
Terrazzo Grinder	5/1/2025		$45.88	$29.41	$75.29
Terrazzo Mechanics	5/1/2023		$50.26	$29.56	$79.82
Terrazzo Mechanics	5/1/2025		$52.21	$31.26	$83.47
Tile Finisher	5/1/2023		$39.52	$29.30	$68.82
Tile Finisher	5/1/2025		$41.17	$30.75	$71.92
Tile Setter	5/1/2023		$50.26	$29.56	$79.82
Tile Setter	5/1/2025		$52.21	$31.26	$83.47
Truckdriver class 1(see notes)	5/1/2024		$36.79	$22.54	$59.33
Truckdriver class 2 (see notes)	5/1/2024		$36.89	$22.54	$59.43
Window Film / Tint Installer	6/1/2024		$26.37	$14.83	$41.20
Window Film / Tint Installer	6/1/2025		$27.42	$15.13	$42.55

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Bricklayer	5/1/2025		$50.00	$32.57	$82.57
Carpenter - Chief of Party (Surveying & Layout)	5/1/2025		$65.96	$30.09	$96.05
Carpenter - Chief of Party (Surveying & Layout)	5/1/2026		$67.52	$30.44	$97.96
Carpenter - Instrument Person (Surveying & Layout)	5/1/2025		$58.39	$29.06	$87.45
Carpenter - Instrument Person (Surveying & Layout)	5/1/2026		$60.09	$29.06	$89.15
Carpenter - Rodman (Surveying & Layout)	5/1/2025		$45.88	$23.19	$69.07
Carpenter - Rodman (Surveying & Layout)	5/1/2026		$46.97	$23.54	$70.51
Carpenter	5/1/2025		$57.36	$30.09	$87.45
Carpenter	5/1/2026		$58.71	$30.44	$89.15
Cement Masons	5/1/2023		$43.20	$32.91	$76.11
Cement Masons	5/1/2025		$46.55	$32.66	$79.21
Dockbuilder, Pile Drivers	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder, Pile Drivers	5/1/2026		$56.98	$37.99	$94.97
Dockbuilder/Pile Driver Diver	5/1/2025		$60.31	$44.97	$105.28
Dockbuilder/Pile Driver Diver	5/1/2026		$61.88	$45.47	$107.35
Dockbuilder/pile driver tender	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder/pile driver tender	5/1/2026		$56.98	$37.99	$94.97
Electric Lineman	6/3/2024		$62.07	$33.96	$96.03
Electric Lineman	6/2/2025		$65.10	$34.45	$99.55
Iron Workers (Bridge, Structural, Ornamental, Precast)	7/1/2024		$53.20	$45.01	$98.21
Iron Workers (Riggers)	7/1/2023		$42.53	$34.14	$76.67
Iron Workers (Rodman/Reinforcing)	7/1/2023		$45.70	$34.77	$80.47
Laborers (Class 01 - See notes)	5/1/2025		$40.20	$27.80	$68.00
Laborers (Class 02 - See notes)	5/1/2025		$40.40	$27.80	$68.20
Laborers (Class 03 - See notes)	5/1/2025		$40.40	$27.80	$68.20
Laborers (Class 04 - See notes)	5/1/2025		$35.00	$27.80	$62.80
Laborers (Class 05 - See notes)	5/1/2025		$41.05	$27.80	$68.85
Laborers (Class 06 - See notes)	5/1/2025		$41.10	$27.80	$68.90
Laborers (Class 07 - See notes)	5/1/2025		$40.95	$27.80	$68.75
Laborers (Class 08 - See notes)	5/1/2025		$40.70	$27.80	$68.50
Laborers (Class 09 - See notes)	5/1/2025		$40.55	$27.80	$68.35
Laborers (Class 10- See notes)	5/1/2025		$40.70	$27.80	$68.50
Laborers (Class 11 -See Notes)	5/1/2025		$40.60	$27.80	$68.40
Laborers (Class 12 -See Notes)	5/1/2025		$42.30	$27.80	$70.10
Laborers (Class 13 -See Notes)	5/1/2025		$44.33	$27.80	$72.13
Laborers (Class 14 -See Notes)	5/1/2025		$40.90	$27.80	$68.70
Laborers Utility (PGW ONLY) (Flagperson)	5/1/2025		$34.07	$19.73	$53.80
Laborers Utility (PGW ONLY)	5/1/2025		$41.10	$19.73	$60.83
Landscape Laborer	5/1/2024		$30.28	$24.05	$54.33
Landscape Laborer	5/1/2025		$31.73	$24.15	$55.88
Millwright	5/1/2025		$57.39	$35.81	$93.20
Millwright	5/1/2026		$60.20	$35.81	$96.01
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2025		$54.52	$34.49	$89.01
Operators Class 01 - See Notes (Building, Heavy,	5/1/2026		$55.67	$35.34	$91.01

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Highway)					
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2025		$57.52	$35.38	$92.90
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2026		$58.68	$36.22	$94.90
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2025		$54.27	$34.42	$88.69
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2026		$55.43	$35.26	$90.69
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2025		$57.29	$35.29	$92.58
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2026		$58.44	$36.14	$94.58
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2025		$50.18	$33.22	$83.40
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2026		$51.34	$34.06	$85.40
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2025		$49.88	$33.13	$83.01
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2026		$51.04	$33.97	$85.01
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2025		$48.16	$32.62	$80.78
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2026		$49.32	$33.46	$82.78
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2025		$47.17	$32.33	$79.50
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2026		$48.34	$33.16	$81.50
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2025		$66.26	$39.55	$105.81
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2026		$67.73	$40.48	$108.21
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2025		$65.97	$39.46	$105.43
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2026		$67.44	$40.39	$107.83
Painters - Line Stripping	12/1/2024		$44.12	$27.91	$72.03
Painters - Line Stripping	12/1/2025		$45.12	$29.41	$74.53
Painters Class 2 (see notes)	2/1/2025		$50.85	$33.91	$84.76
Painters Class 2 (see notes)	2/1/2026		$51.61	$35.00	$86.61
Painters Class 3 (see notes)	2/1/2025		$61.81	$33.95	$95.76
Painters Class 3 (see notes)	2/1/2026		$62.57	$35.04	$97.61
Pointers, Caulkers, Cleaners	5/1/2025		$51.35	$31.80	$83.15
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2025		$68.89	$44.73	$113.62
Truckdriver class 1(see notes)	5/1/2024		$36.64	$22.54	$59.18
Truckdriver class 2 (see notes)	5/1/2024		$36.74	$22.54	$59.28

FORM OF GUARANTEE

WHEREAS:

The Contractor, _____

has entered into a Contract with the Owner, _____

_____ for construction of _____

_____ at _____

hereinafter referred to as the Work.

AND WHEREAS:
The
Subcontractor, _____

has entered into an agreement with the Contractor for performance of a portion of said Work.

NOW, THEREFORE:

Pursuant to terms of the Contract, Contractor and the Subcontractor, for their heirs, executors, administrators, successors and assigns, jointly and severally guarantee _____, the Item, as described in Project Manual, Page _____, Paragraph _____, for years, the Period, started from _____ (date).

FURTHERMORE:

In addition to requirements of Conditions of the Contract requiring correction of Work within a period of one year from Date of Substantial Completion, Contractor and Subcontractor do hereby guarantee and warrant that they will make good and replace, at their own cost and expense, all defects appearing in Item during the Period and be responsible for all damage caused Owner by such defects or by Work required to remedy such defects. All corrections to defective work shall be made at convenience of Owner and shall be performed in a good, workmanlike manner.

IT IS UNDERSTOOD THAT:

This guarantee shall in no way be construed to affect, in any manner, any Contract provisions or to modify or limit any obligations, liabilities or duties of Contractor or Subcontractor.

IT IS FURTHER UNDERSTOOD THAT:

This guarantee shall remain binding and irrevocable during the Period that Contractor and Subcontractor shall not contest validity of, or in any way attempt to revoke or withdraw from this Guarantee for any cause whatsoever, whether arising before or after execution of Contract or this Guarantee.

IN WITNESS WHEREOF:

Undersigned Contractor or Subcontractor have caused this instrument to be signed and executed this _____ day of _____, 2026.

(Subcontractor)

WITNESS: By: _____

_____ _____

Title: _____

_____

_____

(Contractor)

WITNESS: By: _____

_____ _____

Title: _____

_____

_____

BONNETT MEDICA ASSOCIATES INCORPORATED

BONNETT MEDICA ASSOCIATES INCORPORATED
ARCHITECTS • PLANNERS • ENGINEERS • PROJECT MANAGERS

006016- BULLETIN

Bulletin No.

To: Date:

Project: DOOR AND HARDWARE REPLACEMENTS AT RUSSELL ELEMENTARY SCHOOL for Marple Newtown School District

Architect Project No. 26103.00

This Bulletin is issued to inform you of certain modifications, additions, and/or deletions required after execution of the Contract. Unless otherwise noted or specified thereinafter, or shown on Drawings accompanying this Bulletin, all Work required by this Bulletin shall conform to applicable provisions of Contract Documents. You are requested to submit, to BONNETT MEDICA ASSOCIATES INCORPORATED within ten (10) days, an itemized quotation for Work involved. List building items and quantities and apply Contract Unit Prices where applicable. Where Unit Prices are not available, list material quantities and labor rates and show overhead and profit charges in accordance with Contract Agreement. In addition, please state increase, decrease, or no change in Contract Time requested to perform Work required by this Bulletin.

DESCRIPTION OF CHANGES:

DRAWINGS AND REVISIONS:

REASONS FOR CHANGES:

ACTION TO BE TAKEN:

_____ Submit estimate only. You are not authorized to proceed with this Work.

_____ Clarification of Contract Documents. No change in Contract Price.

_____ You are hereby authorized to proceed immediately as outlined or as per plan revision herewith. Submit estimate or construction cost revision resulting therefrom. A Change Order will be issued when costs involved have been established and the Owner has executed approval.

By: _____
BONNETT MEDICA ASSOCIATES INCORPORATED

1242 WEST CHESTER PIKE • UPPER FLOOR, SUITE 11
WEST CHESTER, PENNSYLVANIA 19382 • TELEPHONE 610•368•6678

BONNETT MEDICA ASSOCIATES INCORPORATED
ARCHITECTS • PLANNERS • ENGINEERS • PROJECT MANAGERS

DIGITAL FILE REQUEST FORM

DATE OF REQUEST: _____

PROJECT NAME: DOOR AND HARDWARE REPLACEMENTS AT RUSSELL ELEMENTARY SCHOOL

NAME OF PRIME CONTRACTOR SUBMITTING REQUEST: _____

ADDRESS & PHONE NUMBER OF PRIME CONTRACTOR SUBMITTING REQUEST: _____

_____

CONDITIONS:
You have requested access to our copyrighted electronic CAD background files as prepared by Bonnett Medica Associates Incorporated or Consultants hired by Bonnett Medica Associates Incorporated for the above titled project. It is our understanding that these electronic files will be used only to assist you for the submittal process for the above-mentioned project. You are authorized to have access to these copyrighted plans expressly for use on this project with the following conditions: the plans are diagrammatic and not for the purpose of determining dimensions or exact conditions that will be encountered; the plans will not be released for any other purpose by you to any other entity or person not associated with the project and may not be reused on another project; the plans remain the property of Bonnett Medica Associates Incorporated, all copyright laws remain in full effect regarding design solutions, configurations, aesthetics, and all other features of the project; and Bonnett Medica Associates Incorporated and our Consultants will be held harmless by the requesting Prime Contractor identified above from any and all liability arising out of the access extended to you and your subcontractors to these electronic backgrounds.

Although we cannot supervise and therefore cannot be responsible for the subsequent use of these documents as required by the laws of the Commonwealth of Pennsylvania with regard to the practice of Architecture and Engineering, we do hope that your access to them will facilitate the submittal process. An authorized officer, partner, or owner of the above referenced Prime Contractor company shall sign and return a copy of this document to us indicating your acceptance of the terms of this authorization and limitation of liability. The files will be made available to you upon our receipt of this document with an original signature of an authorized representative of the above referenced Prime Contractor.

1. Bonnett Medica Associates Inc. continually upgrades to the newest AutoCAD software. For file conversion please visit Autodesk.com and download DWG TrueView for free.
2. Method of Distribution Requested: (Check one only)
   Note: Files shall be issued to the requesting Prime Contractor only.

____ via Fed EX Prime Contractor shall provide their FedEx Shipping Code and shall be responsible for associated Fed Ex costs.

____ via Email Prime Contractor's email address: _____

Accepted for

_____ by: _____

Insert name of requesting Prime Contractor — Signature

_____

Printed Name — Date

1242 WEST CHESTER PIKE • UPPER FLOOR, SUITE 11
WEST CHESTER, PENNSYLVANIA 19382 • TELEPHONE 610•368•6678

Commonwealth of Pennsylvania

Public Works Employment Verification Form

Complete and return the form to the contracting Public Body prior to the award of the contract.

Company Legal Name: _____

Doing Business As: _____
(if different from Legal Name)

Mailing Address: _____
Street Address 1

_____
Street Address 2

_____
City State Zip Code

Check one: ☐ Contractor ☐ Subcontractor

Contracting Public Body: _____

Contract/Project Number: _____

Project Description: _____

Project Location: _____

Date Enrolled in E-Verify (MM/DD/YYYY): _____

As a contractor/subcontractor for the above referenced public works contract, I hereby affirm that as of today's date, _____**,** our company is in compliance with the Public Works Employment Verification Act ('the Act') through utilization of the federal E-Verify Program (EVP) operated by the United States Department of Homeland Security. To the best of my/our knowledge, all employees hired are authorized to work in the United States.

It is also agreed to that all public works contractors/subcontractors will utilize the federal EVP to verify the employment eligibility of each new hire within five (5) business days of the employee start date throughout the duration of the public works contract. Documentation confirming the use of the federal EVP upon each new hire shall be maintained in the event of an investigation or audit.

I,_____, authorized representative of the company above, attest that the information contained in this verification form is true and correct and understand that the submission of false or misleading information in connection with the above verification shall be subject to sanctions provided by law.

_____ _____
Authorized Representative Signature **Date of Signature**

Printed Name: _____

Phone Number: _____ **Email:** _____

BONNETT MEDICA ASSOCIATES INCORPORATED

MARPLE NEWTOWN SCHOOL DISTRICT

DAILY WORK REPORT

PROJECT TITLE & NUMBER: 26103.00
Door and Hardware Replacements at Russell Elementary School
for Marple Newtown School DIstrict

CONTRACTOR

DATE:

Page _____ of _____

Day	S	M	T	W	T	F	S

DATE OF NTP	DAY NO.	WORK HOURS

Temperature AM PM

INSPECTOR

Weather

Report No.

WORK PERFORMED

TRADE

Contractor	Super	Foremen	Journeymen	Apprentice	Others	Hours Worked

VISITORS	DELIVERIES

To the best of my knowledge, the work is in conformance with the approved plans and specifications.

Prepared by: _____ Date: _____

Reviewed by: _____ Date: _____

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project Name:	Door and Hardware Replacements at Russell Elementary School
General Description:	Replace doors and hardware in Russell Elementary School
Project Locality	Broomall
Awarding Agency:	Marple Newtown School District
Contract Award Date:	4/28/2026
Serial Number:	26-01942
Project Classification:	Building
Determination Date:	2/27/2026
Assigned Field Office:	Philadelphia
Field Office Phone Number:	(215)560-1858
Toll Free Phone Number:	
Project County:	Delaware County

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Asbestos & Insulation Workers	5/1/2025		$60.84	$48.71	$109.55
Boilermaker (Commercial, Institutional, and Minor Repair Work)	3/1/2024		$36.71	$19.13	$55.84
Boilermakers	1/1/2024		$52.10	$35.72	$87.82
Bricklayer	5/1/2025		$50.00	$32.57	$82.57
Carpenter - Chief of Party (Surveying & Layout)	5/1/2025		$54.59	$29.02	$83.61
Carpenter - Instrument Person (Surveying & Layout)	5/1/2025		$47.47	$29.02	$76.49
Carpenter - Rodman (Surveying & Layout)	5/1/2025		$23.74	$20.62	$44.36
Carpenters	5/1/2024		$45.72	$29.02	$74.74
Carpenters	5/1/2025		$47.47	$29.02	$76.49
Cement Finishers & Plasterers	5/1/2022		$38.57	$32.39	$70.96
Cement Masons	5/1/2024		$46.70	$32.46	$79.16
Cement Masons	5/1/2025		$48.70	$32.46	$81.16
Dockbuilder, Pile Drivers	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder, Pile Drivers	5/1/2026		$56.98	$37.99	$94.97
Dockbuilder/Pile Driver Diver	5/1/2025		$64.35	$41.74	$106.09
Dockbuilder/Pile Driver Diver	5/1/2026		$66.54	$41.74	$108.28
Dockbuilder/pile driver tender	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder/pile driver tender	5/1/2026		$56.98	$37.99	$94.97
Drywall Finisher	5/1/2025		$40.14	$32.35	$72.49
Electricians	5/1/2024		$69.58	$45.66	$115.24
Electricians	5/1/2025		$70.97	$47.27	$118.24
Elevator Constructor	1/1/2025		$71.85	$45.77	$117.62
Elevator Constructor	1/1/2026		$74.86	$46.86	$121.72
Floor Coverer	5/1/2025		$51.67	$31.69	$83.36
Floor Coverer	5/1/2026		$52.84	$32.86	$85.70
Glazier	5/1/2024		$48.00	$37.50	$85.50
Glazier	5/1/2025		$49.96	$38.34	$88.30
Interior Finish	5/1/2023		$34.60	$25.80	$60.40
Iron Workers (Bridge, Structural, Ornamental, Precast)	7/1/2024		$53.20	$45.01	$98.21
Iron Workers (Riggers)	7/1/2024		$44.64	$34.39	$79.03
Iron Workers (Riggers)	7/1/2025		$44.77	$36.27	$81.04
Iron Workers (Rodman/Reinforcing)	7/1/2024		$47.70	$34.77	$82.47
Iron Workers (Rodman/Reinforcing)	7/1/2025		$47.80	$36.65	$84.45
Laborers (Class 01 - See notes)	5/1/2024		$35.85	$26.00	$61.85
Laborers (Class 01 - See notes)	5/1/2025		$37.25	$26.10	$63.35
Laborers (Class 02 - See notes)	5/1/2024		$39.40	$27.55	$66.95
Laborers (Class 02 - See notes)	5/1/2025		$41.00	$27.70	$68.70
Laborers (Class 03 - See notes)	5/1/2024		$36.27	$26.18	$62.45
Laborers (Class 03 - See notes)	5/1/2025		$37.67	$26.28	$63.95
Laborers (Class 04 - See notes)	5/1/2024		$36.27	$26.18	$62.45
Laborers (Class 04 - See notes)	5/1/2025		$37.67	$26.28	$63.95
Laborers (Class 05 - See notes)	5/1/2024		$35.85	$26.00	$61.85
Laborers (Class 05 - See notes)	5/1/2025		$37.25	$26.10	$63.35
Landscape Laborer	5/1/2024		$30.70	$24.23	$54.93

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Landscape Laborer	5/1/2025		$32.15	$24.30	$56.45
Marble Finisher	5/1/2025		$41.17	$30.75	$71.92
Marble Mason	5/1/2023		$47.20	$31.95	$79.15
Mason Tender, Cement	5/1/2023		$35.02	$25.98	$61.00
Millwright	5/1/2025		$57.39	$35.81	$93.20
Millwright	5/1/2026		$60.20	$35.81	$96.01
Operators (Building, Class 01 - See Notes)	5/1/2025		$54.52	$34.49	$89.01
Operators (Building, Class 01 - See Notes)	5/1/2026		$55.67	$35.34	$91.01
Operators (Building, Class 01A - See Notes)	5/1/2025		$57.52	$35.38	$92.90
Operators (Building, Class 01A - See Notes)	5/1/2026		$58.68	$36.22	$94.90
Operators (Building, Class 02 - See Notes)	5/1/2025		$54.27	$34.42	$88.69
Operators (Building, Class 02 - See Notes)	5/1/2026		$55.43	$35.26	$90.69
Operators (Building, Class 02A - See Notes)	5/1/2025		$57.29	$35.29	$92.58
Operators (Building, Class 02A - See Notes)	5/1/2026		$58.44	$36.14	$94.58
Operators (Building, Class 03 - See Notes)	5/1/2025		$50.18	$33.22	$83.40
Operators (Building, Class 03 - See Notes)	5/1/2026		$51.34	$34.06	$85.40
Operators (Building, Class 04 - See Notes)	5/1/2025		$49.88	$33.13	$83.01
Operators (Building, Class 04 - See Notes)	5/1/2026		$51.04	$33.97	$85.01
Operators (Building, Class 05 - See Notes)	5/1/2025		$48.16	$32.62	$80.78
Operators (Building, Class 05 - See Notes)	5/1/2026		$49.32	$33.46	$82.78
Operators (Building, Class 06 - See Notes)	5/1/2025		$47.17	$32.33	$79.50
Operators (Building, Class 06 - See Notes)	5/1/2026		$48.34	$33.16	$81.50
Operators (Building, Class 07A- See Notes)	5/1/2025		$66.26	$39.55	$105.81
Operators (Building, Class 07A- See Notes)	5/1/2026		$67.73	$40.48	$108.21
Operators (Building, Class 07B- See Notes)	5/1/2025		$65.97	$39.46	$105.43
Operators (Building, Class 07B- See Notes)	5/1/2026		$67.44	$40.39	$107.83
Painters Class 1 (see notes)	5/1/2024		$42.97	$34.11	$77.08
Painters Class 1 (see notes)	5/1/2025		$44.38	$34.55	$78.93
Painters - Line Stripping	12/1/2024		$44.12	$27.91	$72.03
Painters - Line Stripping	12/1/2025		$45.12	$29.41	$74.53
Painters Class 4 (see notes)	5/1/2024		$45.06	$34.11	$79.17
Painters Class 4 (see notes)	5/1/2025		$46.47	$34.55	$81.02
Plasterers	5/1/2024		$39.88	$33.08	$72.96
plumber	5/1/2024		$67.53	$38.31	$105.84
plumber	5/1/2025		$70.53	$39.46	$109.99
Pointers, Caulkers, Cleaners	5/1/2023		$48.80	$30.70	$79.50
Pointers, Caulkers, Cleaners	5/1/2025		$51.35	$31.80	$83.15
Roofers (Composition)	5/1/2024		$44.13	$34.77	$78.90
Roofers (Shingle)	5/1/2024		$34.35	$22.20	$56.55
Roofers (Slate & Tile)	5/1/2024		$37.35	$22.20	$59.55
Sheet Metal Workers	5/1/2024		$59.22	$50.56	$109.78
Sheet Metal Workers	5/1/2025		$62.62	$52.17	$114.79
Sign Makers and Hangars	7/15/2024		$32.32	$25.82	$58.14
Sign Makers and Hangars	7/15/2025		$33.48	$26.41	$59.89

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Building	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Sprinklerfitters	1/1/2023		$62.23	$31.99	$94.22
Sprinklerfitters	5/1/2025		$70.37	$34.85	$105.22
Steamfitters	5/1/2024		$70.32	$43.09	$113.41
Steamfitters	5/1/2025		$72.52	$44.89	$117.41
Stone Masons	5/1/2023		$47.20	$31.95	$79.15
Stone Masons	5/1/2025		$50.00	$32.80	$82.80
Terrazzo Finisher	5/1/2023		$43.75	$27.86	$71.61
Terrazzo Finisher	5/1/2025		$45.61	$29.41	$75.02
Terrazzo Grinder	5/1/2023		$44.02	$27.86	$71.88
Terrazzo Grinder	5/1/2025		$45.88	$29.41	$75.29
Terrazzo Mechanics	5/1/2023		$50.26	$29.56	$79.82
Terrazzo Mechanics	5/1/2025		$52.21	$31.26	$83.47
Tile Finisher	5/1/2023		$39.52	$29.30	$68.82
Tile Finisher	5/1/2025		$41.17	$30.75	$71.92
Tile Setter	5/1/2023		$50.26	$29.56	$79.82
Tile Setter	5/1/2025		$52.21	$31.26	$83.47
Truckdriver class 1(see notes)	5/1/2024		$36.79	$22.54	$59.33
Truckdriver class 2 (see notes)	5/1/2024		$36.89	$22.54	$59.43
Window Film / Tint Installer	6/1/2024		$26.37	$14.83	$41.20
Window Film / Tint Installer	6/1/2025		$27.42	$15.13	$42.55

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Bricklayer	5/1/2025		$50.00	$32.57	$82.57
Carpenter - Chief of Party (Surveying & Layout)	5/1/2025		$65.96	$30.09	$96.05
Carpenter - Chief of Party (Surveying & Layout)	5/1/2026		$67.52	$30.44	$97.96
Carpenter - Instrument Person (Surveying & Layout)	5/1/2025		$58.39	$29.06	$87.45
Carpenter - Instrument Person (Surveying & Layout)	5/1/2026		$60.09	$29.06	$89.15
Carpenter - Rodman (Surveying & Layout)	5/1/2025		$45.88	$23.19	$69.07
Carpenter - Rodman (Surveying & Layout)	5/1/2026		$46.97	$23.54	$70.51
Carpenter	5/1/2025		$57.36	$30.09	$87.45
Carpenter	5/1/2026		$58.71	$30.44	$89.15
Cement Masons	5/1/2023		$43.20	$32.91	$76.11
Cement Masons	5/1/2025		$46.55	$32.66	$79.21
Dockbuilder, Pile Drivers	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder, Pile Drivers	5/1/2026		$56.98	$37.99	$94.97
Dockbuilder/Pile Driver Diver	5/1/2025		$60.31	$44.97	$105.28
Dockbuilder/Pile Driver Diver	5/1/2026		$61.88	$45.47	$107.35
Dockbuilder/pile driver tender	5/1/2025		$55.23	$37.99	$93.22
Dockbuilder/pile driver tender	5/1/2026		$56.98	$37.99	$94.97
Electric Lineman	6/3/2024		$62.07	$33.96	$96.03
Electric Lineman	6/2/2025		$65.10	$34.45	$99.55
Iron Workers (Bridge, Structural, Ornamental, Precast)	7/1/2024		$53.20	$45.01	$98.21
Iron Workers (Riggers)	7/1/2023		$42.53	$34.14	$76.67
Iron Workers (Rodman/Reinforcing)	7/1/2023		$45.70	$34.77	$80.47
Laborers (Class 01 - See notes)	5/1/2025		$40.20	$27.80	$68.00
Laborers (Class 02 - See notes)	5/1/2025		$40.40	$27.80	$68.20
Laborers (Class 03 - See notes)	5/1/2025		$40.40	$27.80	$68.20
Laborers (Class 04 - See notes)	5/1/2025		$35.00	$27.80	$62.80
Laborers (Class 05 - See notes)	5/1/2025		$41.05	$27.80	$68.85
Laborers (Class 06 - See notes)	5/1/2025		$41.10	$27.80	$68.90
Laborers (Class 07 - See notes)	5/1/2025		$40.95	$27.80	$68.75
Laborers (Class 08 - See notes)	5/1/2025		$40.70	$27.80	$68.50
Laborers (Class 09 - See notes)	5/1/2025		$40.55	$27.80	$68.35
Laborers (Class 10- See notes)	5/1/2025		$40.70	$27.80	$68.50
Laborers (Class 11 -See Notes)	5/1/2025		$40.60	$27.80	$68.40
Laborers (Class 12 -See Notes)	5/1/2025		$42.30	$27.80	$70.10
Laborers (Class 13 -See Notes)	5/1/2025		$44.33	$27.80	$72.13
Laborers (Class 14 -See Notes)	5/1/2025		$40.90	$27.80	$68.70
Laborers Utility (PGW ONLY) (Flagperson)	5/1/2025		$34.07	$19.73	$53.80
Laborers Utility (PGW ONLY)	5/1/2025		$41.10	$19.73	$60.83
Landscape Laborer	5/1/2024		$30.28	$24.05	$54.33
Landscape Laborer	5/1/2025		$31.73	$24.15	$55.88
Millwright	5/1/2025		$57.39	$35.81	$93.20
Millwright	5/1/2026		$60.20	$35.81	$96.01
Operators Class 01 - See Notes (Building, Heavy, Highway)	5/1/2025		$54.52	$34.49	$89.01
Operators Class 01 - See Notes (Building, Heavy,	5/1/2026		$55.67	$35.34	$91.01

BUREAU OF LABOR LAW COMPLIANCE
PREVAILING WAGES PROJECT RATES

Project: 26-01942 - Heavy/Highway	Effective Date	Expiration Date	Hourly Rate	Fringe Benefits	Total
Highway)					
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2025		$57.52	$35.38	$92.90
Operators Class 01a - See Notes (Building, Heavy, Highway)	5/1/2026		$58.68	$36.22	$94.90
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2025		$54.27	$34.42	$88.69
Operators Class 02 - See Notes (Building, Heavy, Highway)	5/1/2026		$55.43	$35.26	$90.69
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2025		$57.29	$35.29	$92.58
Operators Class 02a - See Notes (Building, Heavy, Highway)	5/1/2026		$58.44	$36.14	$94.58
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2025		$50.18	$33.22	$83.40
Operators Class 03 - See Notes (Building, Heavy, Highway)	5/1/2026		$51.34	$34.06	$85.40
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2025		$49.88	$33.13	$83.01
Operators Class 04 - See Notes (Building, Heavy, Highway)	5/1/2026		$51.04	$33.97	$85.01
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2025		$48.16	$32.62	$80.78
Operators Class 05 - See Notes (Building, Heavy, Highway)	5/1/2026		$49.32	$33.46	$82.78
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2025		$47.17	$32.33	$79.50
Operators Class 06 - See Notes (Building, Heavy, Highway)	5/1/2026		$48.34	$33.16	$81.50
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2025		$66.26	$39.55	$105.81
Operators Class 07 (A) - See Notes (Building, Heavy, Highway)	5/1/2026		$67.73	$40.48	$108.21
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2025		$65.97	$39.46	$105.43
Operators Class 07 (B) - See Notes (Building, Heavy, Highway)	5/1/2026		$67.44	$40.39	$107.83
Painters - Line Stripping	12/1/2024		$44.12	$27.91	$72.03
Painters - Line Stripping	12/1/2025		$45.12	$29.41	$74.53
Painters Class 2 (see notes)	2/1/2025		$50.85	$33.91	$84.76
Painters Class 2 (see notes)	2/1/2026		$51.61	$35.00	$86.61
Painters Class 3 (see notes)	2/1/2025		$61.81	$33.95	$95.76
Painters Class 3 (see notes)	2/1/2026		$62.57	$35.04	$97.61
Pointers, Caulkers, Cleaners	5/1/2025		$51.35	$31.80	$83.15
Steamfitters (Heavy and Highway - Gas Distribution)	5/1/2025		$68.89	$44.73	$113.62
Truckdriver class 1(see notes)	5/1/2024		$36.64	$22.54	$59.18
Truckdriver class 2 (see notes)	5/1/2024		$36.74	$22.54	$59.28

SECTION 010100 - SUMMARY OF WORK

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SCOPE OF WORK

For the Door and Hardware Replacement at Russell Elementary School in the Marple Newtown School District. Including the following prime contracts:

1. **General Construction Contract: :** General Construction consisting of but not limited to the following: removal, replacement, and new work addressing all conditions required to complete the work of this contract as indicated on Drawings A-100, A-101 and A-600, and in Project Manual; temporary facilities and services; selective demolition; doors, hardware, sealants and interior finishes and safety wall padding.

2. Contractors shall be responsible to review all Architectural Drawings and Scope of Work and all divisions of specifications to establish work and/or requirements affecting their contract.

1.3 COORDINATION OF TRADES AND SCHEDULES

A. Each Prime Contractor shall have a full time superintendent on site throughout the project construction.

B. All work shall be coordinated and scheduled by the Prime Contractor to allow for a smooth sequence of installation and coordination to maintain project schedule.

1.4 GENERAL

A. Each Prime Contractor shall provide all labor, materials and equipment necessary to complete the work of this contract, the cost of which shall be included in the contract price stated on the Proposal Form.

B. Each Prime Contractor shall be responsible for their own site restoration work including concrete and asphalt paving repairs and lawn and landscaping restoration.

B. Each Prime Contractor shall provide all bonds and insurance required by the Contract Documents, the cost of which shall be included in the contract prices stated on the Proposal Form.

C. Each Prime Contractor shall obtain all construction licenses required by governing authorities having jurisdiction for his scope of work on the project. The Marple Newtown School District shall obtain and pay for construction permits (not licenses).

D. All work shown on the drawing(s) or specified in the written specifications shall be deemed to be included in this contract as new work unless marked "existing" or otherwise excluded from the contract. Work products or materials required by the drawing(s) or necessary to provide a complete installation which are not included in the written specifications shall be provided by the Contractor as part of the cost stated on the Proposal Form. The quality of such products and materials, not specifically specified, shall be a first-class standard product as accepted by the Owner and Bonnett Associates Incorporated shall be provided.

E. The Drawings generally indicate the location of all work described in the Technical Specifications. The Contractor prior to submitting his bid, shall visit the site to determine exact quantities of materials and labor and assess all existing conditions which will affect the contract. Upon executing a written Agreement with the Owner, the Contractor certifies that all existing conditions have been evaluated, quantities of all materials and labor have been established and that the contract will be completed for the costs stated in writing on the Form of Proposal and in the written Agreement.

END OF SECTION 010100

SECTION 010400 - COORDINATION

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SUMMARY

A. Section Includes:
   1. Licenses.
   2. Access to the site.
   3. Contractor's use of the premises.
   4. Coordination requirements.
   5. Coordination drawings.
   6. Preconstruction meeting.

1.3 DEFINITIONS

A. Furnish: To supply products to the project site, including delivery ready for unloading and replacing damaged and rejected products.

B. Install: To put products in place in the work ready for the intended use, including unloading, unpacking, handling, storing, assembling, installing, erecting, placing, applying, anchoring, working, finishing, curing, protecting, cleaning, and similar operations.

C. Provide: To furnish and install products.

D. Indicated: Shown, noted, scheduled, specified, drawn, or referenced in the contract documents.

1.4 REGULATORY REQUIREMENTS

A. This project is subject to all federal, state, and local regulations and building codes.

B. Submit copies of licenses and similar permissions obtained, and receipts for fees paid, to the Architect.

1.5 ACCESS TO THE SITE AND USE OF THE PREMISES

A. The space available to the Contractor for the performance of the work, either exclusively or in conjunction with others performing other construction as part of the project, is restricted to the designated area within the legal description of the site unless the Contractor makes arrangements to use additional space.

B. Location for contractor's on site storage trailers, toilets, and refuse dumpsters will be as directed by Owner, within restricted area on site as shown on contract documents.

C. All personnel, equipment, materials, and debris of contractor, subcontractors and material men shall remain clear of Owner's occupancy on site, including streets, driveways, parking areas, yards, exit ways and occupied areas. Owner shall be given 48-hours notice prior to any service shutdown or access blockage. When emergency means of egress must be modified, provide alternate facilities acceptable to Owner.

D. Signs: Provide signs adequate to direct visitors and deliveries.
   1. Do not install, or allow to be installed, signs other than specified sign(s) and signs identifying the principal entities involved in the project. Secure permission to install signs and sign location from Owner.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 PRECONSTRUCTION MEETING

A. A Preconstruction Meeting will be held at a time and place designated by the Architect, for the purpose of identifying responsibilities of the Owner's, the Architect's personnel and explanation of administrative procedures.

B. The Contractor shall also use this meeting for the following minimum agenda:
   1. Construction schedule.
   2. Use of areas of the site.
   3. Delivery and storage.
   4. Safety.
   5. Security.
   6. Cleaning up.
   7. Subcontractor procedures relating to:
      a. Submittals.
      b. Change orders.
      c. Applications for payment.
      d. Record documents.
   8. Special Conditions

C. Attendees shall include:
   1. The Owner's representative.
   2. The Architect, and any consultants.
   3. Each prime Contractor and their superintendents.
   4. Major subcontractors, suppliers, and fabricators.

3.2 COORDINATION WITH OWNER

A. Working hours shall be coordinated with the Owner. Exterior noise generating activities may not start prior to 7:00 AM and must stop by 8:00 PM, unless otherwise dictated by local regulations.

B. Contractors shall comply with local ordinances and Owner's requirements regarding activities on site, including smoking, use of radios, parking, deliveries and debris clean-up.

C. Deliveries to the project site shall not be permitted during student pick-up and drop-off times. Exact time and duration of these time periods to be established at the Preconstruction Meeting and coordinated through the Architect.

D. No smoking and no foul language will be permitted on the school site.

3.3 SECURITY PROCEDURES

A. Limit access to the site to persons involved in the work. Comply with the Owner's requirements for personnel identification, inspection and other security measures. All Contractor employees, including subcontractor employees, shall be required to obtain an Owner photo identification card prior to accessing the project site. Owner issued identification cards shall be worn at all times while on the project site. Employees who do not adhere to these established security measures shall be subject to immediate exclusion from the job site. Owner issued identification badges shall be obtained from the Marple Newtown School District’s photo ID center.

B. Provide secure storage for materials for which the Owner has made payment and which are stored on site.

C. Secure completed work as required to prevent loss or damage.

D. Secure and ensure weather-tight conditions at existing facility and new construction.

3.4 COORDINATION OF PRIME CONTRACTORS

A. Each prime Contractor shall coordinate his activities with the activities of other Contractors.

B. Contractors shall, if necessary, notify other Prime Contractors involved, in writing, of procedures required for coordination; include requirements for giving notice, submitting reports, and attending meetings.
   1. Inform Owner when coordination of his work is required.

END OF SECTION 010400

SECTION 010450 -CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for cutting and patching.

B. Related Sections: The following Sections contain requirements that relate to this Section:

1. Division 1 Section "Coordination" for procedures for coordinating cutting and patching with other construction activities.
2. Division 2 Section "Selective Demolition" for demolition of selected portions of the building for alterations.
3. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.3 SUBMITTALS

A. Cutting and Patching Proposal: Submit a proposal describing procedures well in advance of the time cutting and patching will be performed if the Owner requires approval of these procedures before proceeding. Request approval to proceed. Include the following information, as applicable, in the proposal:

1. Describe the extent of cutting and patching required. Show how it will be performed and indicate why it cannot be avoided.
2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
3. List products to be used and firms or entities that will perform Work.
4. Indicate dates when cutting and patching will be performed.
5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structure.
7. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of unsatisfactory work.

1.4 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements:
   a. Foundation construction.
   b. Bearing and retaining walls.
   c. Structural concrete.
   d. Structural steel.
   e. Lintels.
   f. Timber and primary wood framing.
   g. Structural decking.
   h. Stair systems.
   i. Miscellaneous structural metals.
   j. Exterior curtain-wall construction.
   k. Equipment supports.
   l. Piping, ductwork, vessels, and equipment.
   m. Structural systems of special construction.

B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.

1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
   a. Primary operational systems and equipment.
   b. Air or smoke barriers.
   c. Water, moisture, or vapor barriers.
   d. Membranes and flashings.
   e. Fire protection systems.
   f. Noise and vibration control elements and systems.
   g. Control systems.
   h. Communication systems.
   i. Conveying systems.
   j. Electrical wiring systems.
   k. Operating systems of special construction.

C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching. Remove and replace construction cut and patched in a visually unsatisfactory manner.

1. If possible retain the original Installer or fabricator to cut and patch the exposed Work listed below. If it is impossible to engage the original Installer or fabricator, engage another recognized experienced and specialized firm.

   a. Processed concrete finishes.

b. Stonework and stone masonry.
c. Ornamental metal.
d. Matched-veneer woodwork.
e. Preformed metal panels.
f. Firestopping.
g. Window wall system.
h. Stucco and ornamental plaster.
i. Acoustical ceilings.
j. Terrazzo.
k. Finished wood flooring.
l. Fluid-applied flooring.
m. Carpeting.
n. Aggregate wall coating.
o. Wall covering.
p. Swimming pool finishes.
q. HVAC enclosures, cabinets, or covers.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.1 INSPECTION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

3.3 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.

1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.
4. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating and backfilling.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
4. Patch, repair, or rehang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

3.4 CLEANING

A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION 010450

SECTION 012000 - PROGRESS DOCUMENTATION AND PROCEDURES

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SUMMARY

A. Section Includes:

1. Progress documentation requirements:
   a. Contractor's construction schedule.
2. Progress procedures:
   a. Progress meetings.

B. Contract time is indicated in Contract Supplementary General Conditions.

1.3 SUBMITTALS

A. Contractor's Construction Schedule.
1. Submit within 15 days after execution of contract.
2. Up to date schedules shall be distributed at the first construction progress meeting held each month. In order to receive payments, each Contractor must document his progress by submitting a monthly updated schedule with each application for payment.

B. Informational Submittals (Shop Drawing Status, Coordination Reports).

C. Timely Submission of Shop Drawings: Since this project's schedule is aggressive, it will be necessary for all Primes to submit all shop drawings within timeframes indicated in Paragraph 15 of the Supplementary General Conditions.

1.4 FORM OF SUBMITTALS

A. Schedules - General:
1. Provide legend of symbols and abbreviations for each schedule.
2. Use the same terminology as that used in the contract documents.
3. When transparencies are submitted, use only media which will not fade or lose contrast over time.
4. When opaque copies are submitted, submit a minimum of 3 copies.

B. Bar Charts:

1. Provide bar charts generated by network analysis data.
2. Provide individual horizontal bars representing the duration of each major activity.
3. Coordinate each element on the schedule with other construction activities.
4. Show activities in proper sequence.

5. Show percentage of completion of each activity.
6. Use vertical lines to mark the time scale at not more than one week intervals.
7. Prepare on reproducible transparency.
8. Print on a single sheet of sufficient size to show the full schedule clearly.

C. Reports - General:

1. Submit a minimum of 3 copies.

1.6 COORDINATION

A. **The General Construction Contractor is responsible for coordinating the schedule.**

B. In preparation of schedules, take into account the time allowed or required for the Architect's administrative procedures.

C. Notify entity responsible for coordination of schedules promptly when problems are anticipated in meeting schedule dates.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 CONTRACTOR'S CONSTRUCTION SCHEDULE

A. **The General Construction Contractor shall prepare and submit a construction schedule:**

B. Provide construction schedule in the form of network analysis diagrams, with supporting reports.

1. Show dates of:
   a. Each activity that influences the construction time.
   b. Ordering dates for products requiring long lead time.
   c. All submittals required.
   d. Substantial and final completion, with time frames for the Architect's completion procedures.
2. In developing the schedule take into account:
   a. Work under other contracts.
   b. Site limitations.

C. The Architect will notify the Contractor if the schedule is not satisfactory – the Contractor must then revise and resubmit the schedule.

1. Resubmit within 7 days after notice to revise.

D. **The General Construction Contractor** shall make copies of schedule and distribute to the Architect, the Owner, and to other entities whose work will be influenced by schedule dates.

1. Each prime Contractor shall make and distribute copies to his subcontractors, suppliers, and

other parties.

E. **The General Construction Contractor** shall update the schedule whenever changes occur or are made, or when new information is received, but not less often than at the same intervals at which applications for payment are made.

1. Indicate changes made since last issue; show actual dates for activities completed.
2. Submit updated schedule with application for payment.
3. Issue updated schedule with report of meeting at which revisions are made.
4. Issue updated schedule in same manner as original schedule.
5. Include the same supporting reports as for original schedule.
6. Narrative summary of all changes in the Critical Path.

3.2 PROGRESS MEETINGS

A. **The Architect** shall schedule and conduct periodic progress meetings during the construction period, and record and distribute minutes.

1. Have meetings once every two weeks; at option of Owner and Architect, meeting frequency may be reduced if job progress so warrants.

B. The following are required to attend:

1. All Prime Contractors.
2. Prime Contractors' superintendents.
3. Major subcontractors and suppliers.

C. **Each Prime Contractor** shall prepare a report for distribution at the meetings; cover the following topics when applicable:

1. Status of submittals and impending submittals.
2. Off-site fabrication and delivery schedules.
3. Actual progress of activities in relation to the schedule.
4. Actual and anticipated delays, their impact on the schedule, and corrective actions taken or proposed.
5. Actual and potential problems.
6. Status of change order work.
7. Effect of delays, problems, and changes on the schedules.
8. Status of corrective work ordered by the Architect.
9. Progress expected to be made during the next period.

D. **The Architect** shall record minutes and distribute copies at the following job meeting to the Owner, to all participants, and to all entities affected by decisions made.

END OF SECTION 012000

SECTION 012200 – UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for unit prices.

B. Related Requirements:

1. General Conditions and Supplementary General Conditions Section “Changes and Alterations” procedures for submitting and handling Change Orders.
2. Division 01 Section "Quality Requirements" for general testing and inspecting requirements.

1.3 DEFINITIONS

A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

A. For specific listing of Unit Prices see individual forms of proposal for prime contractors to the project.

END OF SECTION 012200

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.3 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

1.4 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.

C. Execute accepted alternates under the same conditions as other work of the Contract.

D. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. The Form of Proposal shall include costs for the following Alternates added or deducted to/from the base Bid. The School District reserves the right to accept, reject or utilize these items in whole or part, at their discretion.

B. ADD / DEDUCT Alternates: Where the Alternate bid includes ADD / DEDUCT, the Bidder shall clearly indicate whether the alternate bid price being provided is an ADD or a DEDUCT by circling either ADD or DEDUCT.

C. General Construction Contract

1. **ADD Alternate Bid No. 1 (GC)**: State the dollar amount to be added to the Base Bid to provide scope associated with Alternate No. 1 in accordance with the Contract Documents.

2. **ADD Alternate Bid No. 2 (GC)**: State the dollar amount to be added to the Base Bid to provide scope associated with Alternate No. 2 in accordance with the Contract Documents.

3. **ADD Alternate Bid No. 3 (GC)**: State the dollar amount to be added to the Base Bid to provide scope associated with Alternate No. 3 in accordance with the Contract Documents.

END OF SECTION 012300

SECTION 012750 - QUANTITY ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes:

1. Administrative and procedural requirements governing quantity allowances.
2. Schedule(s) of Quantity Allowances. Quantity Allowances enumerated herein and defined in Part 3 of this section shall be covered within each primes base bid proposals. The numerical count assigned to each allowance item is in excess of the quantities enumerated on the drawings and in the schedules.

1.3 DEFINITIONS

A. A quantity allowance is, unless otherwise specified herein, a stipulated quantity of work to be included in the Base Bid, or, if so stated, in an Alternate Bid, for areas or locations not indicated to receive such work.

B. All quantity allowance items enumerated herein shall be supplied from specified manufacturers and installed per the “execution” standards cited in the specific specification section governing the installation of the materials/assemblies.

1.4 ADMINISTRATIVE REQUIREMENTS AND PROCEDURES

A. Quantity allowances shall include all costs for the specified Work, including, as applicable, cost of materials, delivery, installation, demolition, cutting and patching, equipment rental, insurance, taxes, overhead and profit, etc.

B. Use each quantity allowance only as directed and for Owner's purposes.

1. Be advised, identical or similar Work to the type(s) included in each quantity allowance may be required if and where indicated in the Contract Documents for specific locations or areas of construction. Such specifically identified or designated areas of Work are included in the scope of work, but NOT as part of the quantity allowances unless so specified in the schedule(s) of quantity allowances in this Section 012750.

C. No cash allowances are included in this Project.

D. List each quantity allowance on the Schedule of Values as its own line item to enable tracking of the used and unused allowance amounts.

1. At Project closeout, if a quantity allowance has not been used or is only partially used, the remaining unused value shall be deducted from the Contract Sum by Change Order.

1.5 SCHEDULING

A. At the earliest practical date after award of the Contract, notify Owner and Architect of the date when specific areas of work described by each quantity allowance must be completed to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Obtain new materials in the quantity needed for the specific areas of work which are identified and for which authorization is given to proceed. Purchase of more materials than the quantity necessary for the actual work is at the Contractor's own risk.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine products promptly on delivery for damage or defects. Return damaged or defective products to manufacturer for replacement.

3.2 PREPARATION

A. Coordinate materials and their installation for each allowance with related materials and installations to ensure that each item is completely integrated and interfaced with related work.

3.3 GENERAL CONSTRUCTION SCHEDULE OF QUANTITY ALLOWANCES

A. Unit Allowance G.1 – General Laborer:

1. Description: Provide a general laborer for the Owner's use for work as directed by the Architect and at his discretion:
2. Unit of Measure; Per Man-hour.
3. Quantity Allowance:
   a. Include 50 man-hours

B. Unit Allowance G.2 – Journeyman Painter Class 2 Labor:

1. Description: Provide a journeyman painter for Owner's use for work as directed by the Architect and at his discretion:
2. Unit of Measure; Per Man-hour.
3. Quantity Allowance:
   a. Include 50 man-hours

C. Unit Allowance G.3 – Journeyman Carpenter:

1. Description: Provide a journeyman carpenter for Owner's use for work as directed by the Architect and at his discretion:
2. Unit of Measure; Per Man-hour.
3. Quantity Allowance:
   a. Include 50 man-hours

END OF SECTION 012750

SECTION 013000 - SUBMITTALS

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SUMMARY

A. Section Includes:
   1. Preparing and processing of submittals for review and action.
   2. Preparing and processing of informational submittals.
   3. Coordination with project close-out procedures specified in Division 1.
   4. Submittal timing.

B. Submit the following within 7days after contract award:
   1. Certificate of Insurance.
   2. Waiver of Lien.
   3. Performance and Payment Bonds.
   4. Resume of project superintendent (including education and related construction experience).

C. Submit the following for the Architect's review and action:
   1. Shop drawings.
   2. Product data.

D. Submit the following for the Architect's review and action:
   1. Submittal Schedule (within 14 days of contract award for materials that are not long lead items).
   2. List of all subcontractors, manufacturers and products.
   3. Schedule of Values, including labor and materials of each type of construction and phase of the work.

E. Submit the following as informational submittals:
   1. Structural design information required by the contract documents.
   2. Certificates.
   3. Reports and test results.
   4. Qualification statements for manufacturers and subcontractors.
   5. Contractor's certification from manufacturer.
   6. Installer's certification of experience and/or training.
   7. The General Contractor to submit a weekly typed progress status report indicating current construction status as related to overall construction schedule, including material and equipment deliveries and identification of progress obstacles to completion and signed by an officer of the firm.
   8. The General Contractor shall submit with each monthly Application and Certificate for Payment a draw-down schedule for payment, projected on a monthly basis through the end of the project duration.

F. Specific submittals are described in individual specification sections.

G. Do not commence work which requires review of any submittals until receipt of returned submittals with an acceptable action.

H. Submit engineering submittals directly to the Engineer. Submit all other submittals directly to the Architect for review. The Architect / Engineer will return Shop Drawings upon review to the Contractor.

I. Do not submit substitute items that have not been approved by means of procedures specified in Division 1.

J. All Shop Drawings to be submitted by the Prime Contractor only, with the prime contractor's review stamp and signature on each copy.

1.3 DEFINITIONS

A. List of Materials and Subcontractors.
   1. Submit to the Architect within fourteen (14) calendar days after award of Contract. Listing shall be comprehensive and shall list all of the subcontractors, manufacturers, and products giving manufacturer's model number or type, and identification number, listing only one manufacturer, material or product for each item. This list shall be coordinated with requests for approval of subcontractors as required by General Conditions and with requests substitutions approved prior to Bid.

B. Shop Drawings: See General Conditions.
   1. Shop drawings shall also include:
      a. Product data specifically prepared for this project.
      b. Shop or plant inspection and test reports, when made on specific materials, products, or systems to be used in the work.
   2. Submit different units of interrelated work at the same time.
      a. Submit together so that the Architect/Engineer may refer to related submittals during review.
      b. The Architect/Engineer will withhold action on any such submittals unit the related submittals are received.
   3. Perform re-submittals in the same matter as original submittals.
      a. Exception: Transmittal number of re-submittals shall be the same number as the original plus letter suffix; example: 055000-1 would be 055000-1A.
      b. Indicate all changes.
         1. Highlight changes other than those requested by the Architect/Engineer.

C. Product Data: See General Conditions.
   1. Product data submittals also include:
      a. Performance curves, when issued by the manufacturer for all products of that type.
      b. Sample of all specified warranties for each specified product.
      c. Selection data showing standard colors.
      d. Wiring diagrams, when standard for all products of that type.
      e. Contractors shall submit a sample of all specified warranties with the product submittal

package for each specified product for review.

D. Informational Submittals: Submittals identified in the contract documents as to be submitted for information only.

1.4 FORM OF SUBMITTALS

A. Electronic PDF Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. Assemble complete submittal package into a single indexed PDF file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
2. Name file with submittal number or other unique identifier, including revision identifier.

    a. File name shall use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).

3. Provide means for insertion to permanently record Contractor's review and approval markings and action taken by Architect.
4. Transmittal Form for Electronic Submittals: Use electronic form acceptable to Owner and Architect**,** containing the following information:

    a. Project name.
    b. Date.
    c. Name and address of Architect.
    d. Name of Contractor.
    e. Name of firm or entity that prepared submittal.
    f. Names of subcontractor, manufacturer, and supplier.
    g. Category and type of submittal.
    h. Submittal purpose and description.
    i. Specification Section number and title.
    j. Specification paragraph number or drawing designation and generic name for each of multiple items.
    k. Drawing number and detail references, as appropriate.
    l. Location(s) where product is to be installed, as appropriate.
    m. Related physical samples submitted directly.
    n. Indication of full or partial submittal.
    o. Transmittal number**.**
    p. Submittal and transmittal distribution record.
    q. Other necessary identification.
    r. Remarks.

5. Metadata: Include the following information as keywords in the electronic submittal file metadata:

    a. Project name.

b. Number and title of appropriate Specification Section.
c. Manufacturer name.
d. Product name.

B. One (1) copy of all submittals shall be provided to the Owner on one Flash Drive part of closeout documents.

C. Where specifications require samples for approval and / or color selection, electronic format will not be acceptable.

1. Samples for initial selection purposes of manufacturer's standard sample sets in form of pieces cut from each type of product specified showing full range of colors and patterns available.

2. Submit three (3) complete sets of manufacturer's samples where color, pattern, texture or similar characteristics are required to be selected.

3. Color copies or color charts will not be accepted.

1.5 COORDINATION OF SUBMITTALS

A. Coordinate submittals and activities that must be performed in sequence, so that the Architect has enough information to properly review the submittals.

B. Coordinate submittals of different types for the same product or system so that the Architect has enough information to properly review each submittal.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TIMING OF SUBMITTALS

A. Transmit each submittal at or before the time indicated on the approved schedule of submittals or as noted otherwise in Supplementary General Conditions Paragraph 15.
1. Prepare and submit for approval a schedule showing the required dates of submittal of all submittals. Delay of this schedule which impacts material deliveries, completion of the work and coordination of other trades and subsequent scheduled submittals, will be cause for liquidated damages in the amounts specified in Article 16 of the Special Conditions Division of this Specification
2. Organize the schedule by the applicable specification section number.
3. Incorporate the contractor's construction schedule specified elsewhere.
4. Revise and resubmit the schedule for approval when requested.

B. Deliver each submittal requiring approval in time to allow for adequate review and processing time, including resubmittals if necessary; failure of the Contractor in this respect will not be considered as grounds for either an extension of the contract time or additional costs.

C. Deliver each informational submittal prior to start of the work involved, unless the submittal is of a type which cannot be prepared until after completion of the work; submit promptly.

D. If a submittal must be processed within a certain time in order to maintain the progress of the work, state so clearly on the submittal.

E. Allow a minimum of 2 weeks for the first processing of each submittal. Allow more time when submittals must be coordinated with later submittals.

F. Allow a minimum of 2 weeks for processing of resubmittals.

G. If a submittal must be delayed for coordination with other submittals not yet submitted, the Architect may at his option either return the submittal with no action or notify the Contractor of the other submittals which must be received before the submittal can be reviewed.

3.2 SUBMITTAL PROCEDURES - GENERAL

A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.

1. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website **BOX.com**. Enter required data in web-based software site to fully identify submittal.
2. Architect will return annotated file via BOX.com. Annotate and retain one copy of file as a digital Project Record Document file.

B. Contractor Review: Stamp and sign each copy of each submittal certifying compliance with the requirements of the contract documents.

C. Notify the Architect, at time of submittal as follows:

1. In writing with each submittal, all points upon which the submittal does not conform to the requirements of the contract documents, if any.
2. Issue email notification to Architect concurrently with each submittal uploaded to BOX.com. to alert Architect of upload activity.

D. Preparation of Submittals:
1. Label each copy of each submittal, with the following information:
   a. Project name.
   b. Date of submittal.
   c. Contractor's name and address.
   d. Subcontractor's name and address.
   e. Manufacturer's name.
   f. Specification section where the submittal is specified.
   g. Numbers of applicable drawings and details.
   h. Other necessary identifying information.
2. Pack submittals suitably for shipment.
3. Submittals to receive Architect's action marking: Provide blank space on the label or on the submittal itself for action marking; minimum 4 inches wide by 4 inches high.

E. Transmittal of Submittals:
   1. Submittals will be accepted from the Prime Contractor only. Submittals received from other entities will be returned without review or action. Fax submissions will not be accepted for review.
   2. Submittals received without a transmittal form will be returned without review or action.
      a. Project name.
      b. Submittal date.
      c. Specification section number.
      d. To:
      e. From:
      f. Contractor's name.
      g. Subcontractor's and supplier's names.
      h. Manufacturer's name.
      i. Submittal type (shop drawing, product data, sample, informational submittal).
      j. Description of submittal.
   3. Fill out a separate transmittal form for each submittal; also include the following:
      a. Other relevant information.
      b. Requests for additional information.

3.3 SHOP DRAWINGS

A. Content: Include the following information:
   1. Dimensions, at accurate scale.
   2. All field measurements that have been taken, at accurate scale.
   3. Names of specific products and materials used.
   4. Details, identified by contract document sheet and detail numbers.
   5. Show compliance with the specific standards referenced.
   6. Coordination requirements; show relationship to adjacent or critical work.
   7. Name of preparing firm.

B. Preparation:
   1. Reproductions of contract documents are not acceptable as shop drawings unless permission is requested in writing by the contractor and acceptable to the Architect.
   2. Identify as indicated for all submittals.
   3. Space for Architect's action marking shall be adjacent to the title block.

3.4 PRODUCT DATA

A. Submit all product data submittals for each system or unit of work as one submittal.

B. When product data submittals are prepared specifically for this project (in the absence of standard printed information) submit such information as shop drawings and not as product data submittals.

C. Content:
   1. Submit manufacturer's standard printed data sheets.
   2. Identify the particular product being submitted; submit only pertinent pages.
   3. Show compliance with properties specified.
   4. Identify which options and accessories are applicable.
   5. Show compliance with the specific standards referenced.

6. Show compliance with specified testing agency listings; show the limitations of their labels or seals, if any.
7. Identify dimensions which have been verified by field measurement.
8. Show special coordination requirements for the product.

3.5 REVIEW OF SUBMITTALS

A. Submittals for approval will be reviewed, marked with appropriate action, and returned.
B. Informational submittals: Submittals will be reviewed.
   1. "Received": Receipt is acknowledged.
   2. "Not accepted; revise and resubmit."
   3. Transmittal form, only, will be returned.

3.6 RETURN, RESUBMITTAL, AND DISTRIBUTION

A. Submittals will be returned to the Contractor by mail or hand delivery at job meetings. Contractors will be permitted to pick up submissions at Architect's office upon notice of completed review.

B. Perform resubmittals in the same manner as original submittals; indicate all changes other than those requested by the Architect.

C. Distribution:
   1. Distribute returned submittals to all suppliers and subcontractors involved in work covered by the submittal, and any Prime Contractors interfacing with the work.
   2. Make extra copies for operation and maintenance data submittals, as required.
   3. Make one copy for project record documents.

END OF SECTION 013000

SECTION 014000 - QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.

1. Specific quality-control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
2. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with the Contract Document requirements.
3. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.

C. Related Sections include the following:

1. Division 1 Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
2. Division 1 Section "Cutting and Patching" for repair and restoration of construction disturbed by testing and inspecting activities.
3. Divisions 2 through 33 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and ensure that proposed construction complies with requirements.

B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that completed construction complies with requirements. Services do not include contract enforcement activities performed by Architect.

C. Mockups: Full-size, physical example assemblies to illustrate finishes and materials. Mockups are used to verify selections made under Sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not Samples. Mockups establish the standard by which the Work will be accepted.

D. Testing Agency: An entity engaged by the Contractor to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.

1.4 DELEGATED DESIGN

A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.

1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.

1.5 REGULATORY REQUIREMENTS

A. Copies of Regulations: Obtain copies of governing regulations and retain at Project site to be available for reference by parties who have a reasonable need:

1.6 SUBMITTALS

A. Qualification Data: Submit list of testing agencies intended for Project testing. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.

B. Delegated-Design Submittal: In addition to Shop Drawings, Product Data, and other required submittals, submit a statement, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional, indicating that the products and systems are in compliance with performance and design criteria indicated. Include list of codes, loads, and other factors used in performing these services.

C. Schedule of Tests and Inspections: Prepare in tabular form and include the following:

1. Specification Section number and title.
2. Description of test and inspection.
3. Identification of applicable standards.
4. Identification of test and inspection methods.
5. Number of tests and inspections required.
6. Time schedule or time span for tests and inspections.
7. Entity responsible for performing tests and inspections.
8. Requirements for obtaining samples.
9. Unique characteristics of each quality-control service.

D. Reports: Prepare and submit certified written reports that include the following:

1. Date of issue.
2. Project title and number.
3. Name, address, and telephone number of testing agency.
4. Dates and locations of samples and tests or inspections.
5. Names of individuals making tests and inspections.

6. Description of the Work and test and inspection method.
7. Identification of product and Specification Section.
8. Complete test or inspection data.
9. Test and inspection results and an interpretation of test results.
10. Ambient conditions at time of sample taking and testing and inspecting.
11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements.
12. Name and signature of laboratory inspector.
13. Recommendations on retesting and reinspecting.

E. Licenses, and Certificates: For Owner's records, submit copies of licenses, certifications, inspection reports, releases, notices, receipts for fee payments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.7 QUALITY ASSURANCE

A. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

B. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this Project.

C. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.

D. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in material, design, and extent.

F. Specialists: Certain sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

1. Requirement for specialists shall not supersede building codes and similar regulations governing the Work, nor interfere with local trade-union jurisdictional settlements and similar conventions.

G. Testing Agency Qualifications: An agency with the experience and capability to conduct testing and inspecting indicated, as documented by ASTM E 548, and that specializes in types of tests and inspections to be performed.

H. Preconstruction Testing: Testing agency shall perform preconstruction testing for compliance with specified requirements for performance and test methods.

1. Contractor responsibilities include the following:
   a. Provide test specimens and assemblies representative of proposed materials and construction. Provide sizes and configurations of assemblies to adequately demonstrate capability of product to comply with performance requirements.
   b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the Work.
   c. Fabricate and install test assemblies using installers who will perform the same tasks for Project.
   d. When testing is complete, remove assemblies; do not reuse materials on Project.

2. Testing Agency Engaged by Contractor Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to Architect with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the Contract Documents.

I. Mockups: Before installing portions of the Work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by Architect.
2. Notify Architect seven days in advance of dates and times when mockups will be constructed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Architect's acceptance of mockups before starting work, fabrication, or construction.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Demolish and remove mockups when directed, unless otherwise indicated.

1.8 QUALITY CONTROL

A. Contractor Responsibilities: Unless otherwise indicated, provide quality-control services specified and required by authorities having jurisdiction.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality-control services.
2. Notify testing agencies at least 24 hours in advance of time when Work that requires testing or inspecting will be performed.
3. Where quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.

5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

B. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing.

C. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspecting, for construction that revised or replaced Work that failed to comply with requirements established by the Contract Documents.

D. Testing Agency Engaged by Contractor Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
2. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
3. Submit a certified written report, in duplicate, of each test, inspection, and similar quality-control service through Contractor.
4. Do not release, revoke, alter, or increase requirements of the Contract Documents or approve or accept any portion of the Work.
5. Do not perform any duties of Contractor.

E. Contractor’s Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:

1. Access to the Work.
2. Incidental labor and facilities necessary to facilitate tests and inspections.
3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
4. Facilities for storage and field-curing of test samples.
5. Delivery of samples to testing agencies.
6. Preliminary design mix proposed for use for material mixes that require control by testing agency.
7. Security and protection for samples and for testing and inspecting equipment at Project site.

F. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and quality-control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Schedule times for tests, inspections, obtaining samples, and similar activities.

G. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for commencement of the Work.

1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

1.9 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Sections of these Specifications. Restore patched areas and extend restoration into adjoining areas in a manner that eliminates evidence of patching.
2. Comply with the Contract Document requirements for Division 1 Section "Cutting and Patching."

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 014000

SECTION 014210 - REFERENCE STANDARDS AND DEFINITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 DEFINITIONS

A. General: Basic contract definitions are included in the Conditions of the Contract.

B. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on the Drawings; or to other paragraphs or schedules in the Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference. Location is not limited.

C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by the Architect, requested by the Architect, and similar phrases.

D. "Approved": The term "approved," when used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.

E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.

F. "Furnish": The term "furnish" means to supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

G. "Install": The term "install" describes operations at the Project site including the actual unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.

H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.

I. "Installer": An installer is the Contractor or another entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier, to perform a particular construction activity, including installation, erection, application, or similar operations. Installers are required to be experienced in the operations they are engaged to perform.

1. The term "experienced," when used with the term "installer," means having successfully completed a minimum of five previous projects similar in size and scope to this Project; being familiar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.
2. Trades: Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding

generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespersons of the corresponding generic name.

3. Assigning Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by specialists who are recognized experts in those operations. The specialists must be engaged for those activities, and their assignments are requirements over which the Contractor has no option. However, the ultimate responsibility for fulfilling contract requirements remains with the Contractor.
    a. This requirement shall not be interpreted to conflict with enforcing building codes and similar regulations governing the Work. It is also not intended to interfere with local trade-union jurisdictional settlements and similar conventions.

J. "Project site" is the space available to the Contractor for performing construction activities, either exclusively or in conjunction with others performing other work as part of 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 on which the Project is to be built.

K. "Testing Agencies": A testing agency is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

A. Specification Format: These Specifications are organized into Divisions and Sections based on the 33-division format and CSI/CSC's "MasterFormat" numbering system.

B. Specification Content: These Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Abbreviated Language: Language used in the Specifications and other Contract Documents is abbreviated. Words and meanings shall be interpreted as appropriate. Words implied, but not stated, shall be interpolated as the sense requires. Singular words shall be interpreted as plural and plural words interpreted as singular where applicable as the context of the Contract Documents indicates.
2. Imperative mood and streamlined language are generally used in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the Section Text, subjective language is used for clarity to describe responsibilities that must be fulfilled indirectly by the Contractor or by others when so noted.
    a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.

1.4 INDUSTRY STANDARDS

A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents.

C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to the Architect for a decision before proceeding.

1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to the Architect for a decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on the Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.

1. Where copies of standards are needed to perform a required construction activity, the Contractor shall obtain copies directly from the publication source and make them available on request.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards-producing organization, authorities having jurisdiction, or other entity applicable to the context of the text provision. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

F. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following abbreviations and acronyms, as referenced in the Contract Documents, mean the associated names. Names and addresses are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.

1.5 GOVERNING REGULATIONS AND AUTHORITIES

A. Copies of Regulations: Obtain copies of the following regulations and retain at the Project site to be available for reference by parties who have a reasonable need.

1.6 SUBMITTALS

A. Licenses, and Certificates: For the Owner's records, submit copies of licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 014210

SECTION 019500- CONSTRUCTION SUPERINTENDENT

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

B. All Prime Contractors shall provide a Construction Superintendent, as defined in this Section, for the work under their contract. The Construction Superintendent shall be a full time representative of the Prime contractor. The Construction Superintendent shall devote his/her full attention to the administration and coordination of the work of the prime contract and shall not spend time as a journeyman, mechanic or tradesperson, completing the actual construction work of the prime contract.

1.2 SCOPE OF WORK

A. Listed below is the general description of the duties of a full time Construction Superintendent for this Project.

B. Duties of the Construction Superintendent:

1. Coordinate field personnel and be responsible for compliance with contractual requirements, governing authorities and safety regulations.

2. Provide overall detailed C.P.M. construction schedule including project start and completion dates for trade, including: shop drawing submissions, material delivery dates, and installation duration for each activity.

3. Supervise, direct and coordinate the progress of the various subcontractors performing the construction work to insure timely and efficient construction. Attend coordination meetings weekly.

4. Provide continuous on-site inspection to ensure that the work is being performed in accordance with the construction documents and construction debris is removed from premises.

5. Expedite deliveries of material and equipment, submissions of shop drawings, samples, construction drawings and schedules to insure efficient progress.

6. Administer labor relations problems as required.

7. Arrange for construction inspections and testing services, as required.

8. Coordinate and schedule all field testing, witness tests, record findings and distribute reports.

9. Administer construction on a full time basis including extended hours and/or weekends as required to meet projected construction schedule.

10. Update construction network schedule showing critical dates for the various trades of the project and interface between construction contracts, occurring concurrently. Implement and continue to revise schedule periodically, submitting copies to the Owner and Architect.

11. Direct field personnel to location of project work according to trade sequence to meet target schedule dates.

12. Maintain records of contracts, bulletins, change orders, shop drawings, surveys, reports, studies, meetings, site visits, inspections, and communications.

13. Maintain a record set of as-built changes to the Contract Documents.

14. Maintain daily records indicating site visitors, material deliveries, number of men in each trade, location and description of work being performed, weather conditions, etc. and or reason for work stoppage or delay, if any. On a daily basis, this information shall be recorded on the Daily Work Report 006019 provided in the Project Manual and submitted electronically to the Architect on a daily basis.

15. Coordinate Bulletin and Change requests. Obtain cost information. Record existing conditions which may result in a credit or additional cost to the construction contract.

16. Administer site clean-up, construction safety program, and work area access; maintain field office and sanitary facilities; and coordinate and verify building conditions, equipment, materials and site security and protection in accordance other sections in Division 1.

17. Obtain permits, licenses and certificates, Act 34, 114 and 151 clearances, Certified Payrolls, legally required for construction work.

18. Coordinate project design and maintain daily contact with the Architect during the construction period.

19. Assist with the preparation of a Punch List of Work, prior to Substantial Completion and coordinate and expedite the completion of the Work.

20. Coordinate assembly of operating manuals, equipment manuals, guarantees, releases, certificates and as-built drawings for delivery to the Owner and Architect.

END OF SECTION 019500

SECTION 015000 - TEMPORARY FACILITIES AND SERVICES

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SUMMARY

A. Section Includes:
   1. Temporary utilities.
   2. Protective facilities.
   3. Employee facilities.
   4. Administrative facilities.
   5. **General Contractor** shall provide the following, as specified in this section, for the use of all Contractors and subcontractors:
      a. Coordination of location of construction facilities provided by other Contractors.
      b. Entrance locks.
      c. Fire protection facilities.
      d. Other employee protection facilities required by law.
      e. Project identification and safety sign(s).
      f. Public protective facilities required by law.
      g. Temporary toilet facilities.
      h. Floor finish protection.
   6. Each Contractor shall provide all other facilities and services required to accomplish his work.

1.3 REFERENCES

A. NEMA WD 6-1988 -- Wiring Devices--Dimensional Requirements; National Electrical Manufacturer's Association; 1988.

1.4 DEFINITIONS

A. Temporary Facilities: Construction, fixtures, fittings, and other built items required to accomplish the work but which are not incorporated into the finished work.

B. Temporary Utilities: A type of temporary facility; primary sources of electric power, water, natural gas supply, etc., obtained from public utilities, other main distribution systems, or temporary sources constructed for the project, but not including the fixtures and equipment served.

1.5 SUBMITTALS

A. Reports of inspections, tests, and approvals for the installation and use of construction facilities, which are made, or given by public authorities.

1.6 QUALITY ASSURANCE

A. Comply with requirements of governing authorities, as to type, quantity, location, and use of temporary facilities.

B. Comply with requirements of public utilities affected.

1.7 PROJECT CONDITIONS

A. Obtain easements where required.

B. Coordinate scheduling of the implementation and termination of temporary facilities and services with the School District and all other Contractors affected.

C. Use of permanent facilities prior to substantial completion is subject to the Owner's approval and conditions.
   1. Each permanent facility used for construction purposes shall be operated, maintained, and protected during such use by the original installer.
   2. Specified warranties shall not be reduced or voided by temporary use.
   3. Facilities shall be maintained and thoroughly cleaned at end of temporary use.

1.8 SEQUENCING AND SCHEDULING

A. Maintain required facilities until not needed or until shortly before substantial completion; remove facilities before substantial completion.
   1. Exception: Where use of permanent facilities is allowed.

B. Change over to use of permanent facilities, when applicable, as soon as possible, except when use of permanent facilities is not permitted.

PART 2 - PRODUCTS

2.1 MATERIALS

A. General: Provide materials, which are both suitable for the use and durable enough to withstand the use and abuse to be expected.

2.2 PROTECTIVE FACILITIES

A. Fire Protection Facilities: Provide at least the temporary facilities required by the authorities having jurisdiction.
   1. Fire extinguishers to be installed in the completed building shall not be used during construction.
   2. Put permanent facilities into operation as soon as possible.

B. Entrances to Site and Building: Provide locks.
   1. Do not change locking system until substantial completion, unless directed by Owner.
   2. General Contractor shall maintain keys for all locks and provide access to prime contractors on a daily basis.

2.3 EMPLOYEE FACILITIES

A. Toilet Facilities: General Contractor to provide temporary toilet facilities at the site.
   1. Permanent toilet facilities in building shall not be used by contractors.
   2. General Contractor to provide one (1) portable toilet facilities. The Prime Contractor shall be responsible to provide their own additional portable toilet facilities as required for their needs if they exceed the quantities identified herein.
   3. The General Contractor shall be responsible to generally clean and maintain the portable toilet facilities until project completion.
   4. The General Contractor shall provide toilet tissue for each portable toilet facility.

2.4 TEMPORARY CONSTRUCTION

A. Temporary Enclosures for Weather Resistance: When building enclosure is not yet complete but interior construction may be damaged by weather, General Construction Contractor to provide temporary enclosures adequate to keep out weather and maintain building security.

B. Prior to completion of each workday, the General Work Contractor shall be responsible for securing the envelope of the building to protect against weather infiltration and person or persons trespassing into the building by means of the Project areas of work.

C. General Construction Contractor to provide protection for existing flooring in all construction areas.

D. The Prime Construction Contractors shall provide dumpster or trash containers for their trade's refuse. These containers shall be maintained and emptied by each Prime Contractor on a regular basis.

PART 3 - EXECUTION

3.1 GENERAL

A. Cooperate with other contractors in location of temporary facilities.

3.2 TERMINATION AND REMOVAL

A. Remove temporary facilities when no longer needed, or when use of appropriate permanent facility is approved, but not later than substantial completion.

   1. Exception: When longer usage is requested by the Architect or Owner.

B. Complete permanent work delayed, until removal of temporary facilities and restore components and/or areas damaged by temporary facilities.

C. Permanent Facilities Used during Construction: Clean; replace parts that are worn in excess of that expected during normal usage.

END OF SECTION 015000

SECTION 016000- PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SUMMARY

A. Section Includes:
   1. General product requirements, including:
      a. General specification requirements for all products.
      b. Product options.
      c. Procedures for substitution requests.
      d. General requirements and procedures for maintenance materials and tools.
   2. General requirements for product documentation, including:
      a. Requirements and procedures for schedule of products.
      b. General requirements for operation and maintenance data.
      c. General requirements for warranties.
   3. General procedures for products including:
      a. Procedures for transportation and handling.
      b. Procedures for delivery and receiving.
      c. Procedures for storage.

1.3 DEFINITIONS

A. Damage: Any sort of deterioration whether due to weather, normal wear and tear, accident, or abuse, resulting in soiling, marring, breakage, corrosion, rotting, or impairment of function.

1.4 SUBMITTALS

A. Receipts for maintenance materials and tools.

B. Refer to Division 1 - Submittals.

PART 2 - PRODUCTS

2.1 GENERAL

A. Components required to be supplied in quantity within a specification section shall be identical, interchangeable, and made by the same manufacturer.

B. Do not use products removed from existing construction, unless specifically permitted by the contract documents or approved by the Owner.

2.2 MAINTENANCE MATERIALS AND TOOLS

A. Maintenance Materials: Parts and materials for repair and maintenance; specific items required are specified in product sections.
   1. Provide products and tools which are identical to those used in the work; if necessary, to obtain identical items, order at the same time as products to be installed or tools to be used in the work.

B. Package appropriately and label to show type and quantity of contents.

C. Deliver, handle, and store in the same manner as products to be installed.

D. Do not turn over to the Owner until date of substantial completion, unless otherwise approved by the Owner.

E. Deliver to the Owner; unload.

F. Obtain receipt prior to final payment.

PART 3 - EXECUTION

3.1 PRODUCT OPTIONS

A. It is the Contractor's responsibility to select products which comply with the contract documents and which are compatible with one another, with existing work, and with products selected by other contractors.
   1. Verify that electrical characteristics of products are compatible with electrical systems; notify Architect of all discrepancies, prior to material delivery.
   2. Where visual matching to an established physical sample is required, the Architect's decision will be final.

B. Do not use any substitute products which have not been approved in accordance with the requirements of the contract documents; formal substitution request is required. All substitution requests are to be made in advance of the bid date and in accordance with the provisions as set forth in the Special Conditions section of these specifications.

C. Definition of Substitute Product: Any product which does not meet the requirements of the contract documents, whether in product characteristics, performance, quality, manufacturer, model number or brand names, is considered a substitute.

D. Product Options: Where products are specified using more than one method, such as description with a manufacturer list, use a product meeting the requirements of both specification methods.

E. Products Specified by Reference Standard: Use any product meeting the specification. Provisions of reference standards shall not modify the responsibilities of the Owner or Architect as defined in the contract documents.

F. Products Specified by Description: Use any product meeting the specification.

G. Products Specified by Performance Requirements: Use any product meeting the specification.

H. Products Specified to Match a Physical Sample: Use first class product that matches; obtain the Architect's approval.

I. Products Specified by Listing a Brand Name Product as the "Basis of Design": Provide a product equivalent to the product specified within the limits of variation specified; submit substitution request for all products other than that listed as basis of design.

J. Products Specified by Listing Brand Name(s): Provide a product at least equal to the brand name product, or products, listed; submit substitution request for any brand name product not listed.

K. Products Specified by Listing Manufacturer(s): Provide a product meeting the specification; submit substitution request for any manufacturer not listed.

3.2 SUBSTITUTION REQUESTS

A. Substitution requests must be submitted prior to receipt of bids; see Special Conditions.

B. Substitutions will not be considered between the bid date and the award of the contract.

C. Substitutions will not be allowed after award of the contract except when, through no fault of the Contractor, of the specified product is not available.

3.3 SUBSTITUTION PROCEDURE

A. Submission of request for substitution shall constitute a representation by the Contractor that he:
   1. Has investigated the proposed product and determined that it is equal to or better than the specified product. Absence of an explicit comparison of any characteristic of the proposed product to the specified product shall constitute a representation that the proposed product is equal to or better than the specified product with regard to that characteristic.
   2. Will provide the same warranty for the proposed product as for the specified product.
   3. Will coordinate the installation and make other changes which may be required for the work to be complete in all respects, including:
      a. Redesign.
      b. Additional components and capacity required by other work affected by the change.
   4. Waives all claims for additional costs and time extensions which subsequently may become apparent and which are caused by the change.

B. Substitutions will not be considered when acceptance would require substantial revision of the contract documents.

C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals without separate written request.

D. Substitution requests will not be considered when submitted directly by subcontractor or supplier.

E. Substitution Request Procedure: Submit written request with complete data substantiating compliance of the proposed product with the requirements of the Contract Documents.
   1. Submit request to the Architect.
   2. Submit 5 copies of each request and accompanying data.

3. Only one request for substitution will be considered for each product.

F. Data Required with Substitution Request: Provide at least the following data:
1. Identify product by specification section and paragraph number.
2. Manufacturer's name and address, trade name and model number of product (if applicable), and name of fabricator or supplier (if applicable).
3. Complete product data.
4. An itemized comparison of the proposed product to the specified product.
5. List of maintenance services and replacement materials available.
6. Statement of the effect of the substitution on the construction schedule.
7. Description of changes that will be required in other work or products if the substitute product is approved.

G. The Architect will determine acceptability of the proposed substitution.

H. When the proposed substitution is not accepted, provide the product (or one of the products, as the case may be) specified.

3.4 SCHEDULE OF PRODUCTS

A. Prepare a complete schedule of products used, including the following for each product:
1. Manufacturer's name.
2. Brand or trade name.
3. Model number, if applicable.
4. Reference standard, if more than one is applicable.
5. Arrange products in the schedule by specification sections; indicate paragraph where specified.

B. Prepare and submit a preliminary schedule within 30 days after award of contract; resubmit when revised; submit final schedule prior to final payment.

C. Schedule of products shall not be used to obtain approval of substitute products; make separate request for substitution.

3.5 OPERATION AND MAINTENANCE DATA

A. Provide operation and maintenance data for the types of products listed below and for all other products as specified in individual product sections.
1. Provide data sufficient for operation and maintenance by Owner without further assistance from the manufacturer.
2. Provide completed data at least 30 days prior to instruction of Owner personnel.

B. Data Required For Products - General:
1. Name of manufacturer and product.
2. Name, address, and telephone number of subcontractor or supplier.
3. Local source of replacements.
4. Local source of replaceable parts and supplies.

C. Product Data: Where product data is specified for inclusion in operation and maintenance data, provide manufacturer's data sheets marked to indicate specific product and product options actually installed; delete inapplicable data.

D. Project Record Documents: Provide an additional copy of applicable record documents for inclusion with the operation and maintenance data.

E. Custom Manufactured Products: Provide all information needed for reordering product and components.

F. Finish Materials: Manufacturer's product data, color/texture designations, and manufacturer's instructions for care, cleaning, and maintenance.

G. Products Exposed to Weather and Products for Moisture Protection: Manufacturer's product data, recommended inspection schedule and procedures, maintenance and repair procedures, and maintenance materials required.

H. Equipment: Provide at least the following information:
   1. Product data giving equipment and function description, with normal operating characteristics and limiting conditions.
   2. Starting, operating, and troubleshooting procedures.
   3. Cleaning and maintenance requirements and procedures.
   4. External finish maintenance requirements.
   5. List of maintenance materials required.
   6. List of special tools required.
   7. Parts list: List all replaceable parts, with ordering data.
   8. Recommended quantity of spare parts to be maintained in storage.

I. Systems: Provide overall function description, with diagrams, prepared especially for this project.

J. Form of Data: Prepare data in the form of an instructional manual.
   1. Arrange content logically, using section numbers and sequence of sections indicated on the table of contents of this project manual.
   2. When multiple volumes are used, arrange by related subjects; identify contents in cover title.
   3. Assemble into 3-ring binders with maximum 2-inch ring size.
      a. Hardback, cleanable plastic covers.
      b. Identify each book with title "Operation and Maintenance Instructions" and project name.
      c. Prepare special typewritten data on minimum 20-pound paper.
      d. Provide tabbed divider for each product and system.
      e. Drawings: Bind in with other data; provide reinforced binding edge; fold larger drawings to size of pages.
         1. Do not use pockets or loose drawings.
   4. Provide table of contents for each volume listing:
      a. Name of the project.
      b. Name, address, telephone number, and contact name of:
         1. Subcontractor or supplier.
         2. Contractor.
      c. Index of products and systems included in volume.

3.6 WARRANTIES

A. Provide warranties as specified in individual product sections.

B. Manufacturer Warranties: Manufacturer's standard product warranty running for the manufacturer's standard term, unless otherwise indicated.
   1. Submit copies of all manufacturer warranties which extend beyond the end of the contract correction period.

C. Special Project Warranties: Written warranty commencing at date of substantial completion, running for the term indicated, and signed by the entities specified.
   1. Where completion of warranty item is materially delayed beyond the date of substantial completion, provide warranty commencing on date of acceptance.
   2. Submit each special project warranty.

D. Provide 4 copies of each executed warranty.

E. Show actual date of commencement on each warranty.

3.7 TRANSPORTATION AND HANDLING

A. Require supplier to package finished products in a manner which will protect from damage during shipping, handling, and storage.

B. Transport products by methods which avoid damage.

C. Deliver in dry, undamaged condition in manufacturer's unopened packaging.

D. Provide equipment and personnel adequate to handle products by methods which prevent damage.

E. Provide additional protection during handling where necessary to prevent damage to products and packaging.

F. Lift large and heavy components at designated lift points only.

3.8 DELIVERY AND RECEIVING

A. Arrange deliveries of products to allow time for inspection prior to installation.

B. Coordinate delivery to avoid conflict with the work and to take into account both the conditions at the site and the availability of personnel, handling equipment, and storage space.

C. Clearly mark partial deliveries to identify contents, to permit easy accumulation of entire delivery, and to facilitate assembly.

D. Promptly inspect shipments and remedy damage, incorrect quantity, incompleteness, improper or illegible labeling, and noncompliance with requirements of contract documents and approved submittals.

3.9 STORAGE

A. No indoor storage areas are available on site.

B. General Storage Procedures:
   1. Store products immediately on delivery.
   2. Store products in accordance with manufacturer's instructions, with seals and labels intact and legible.
   3. Store in a manner to prevent damage to the stored products and to the work.
   4. Store moisture-sensitive products in weathertight enclosures.
   5. Store indoors if necessary, to keep temperature and humidity within ranges required by manufacturer.
   6. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.
   7. Arrange storage to provide access for inspection and inventory.
   8. Periodically inspect and remedy damage and noncompliance with required conditions.

C. Loose Granular Materials: Store on solid surfaces in well-drained area; prevent mixing with foreign materials.

D. Exterior Storage:
   1. Cover products subject to weather damage with impervious sheet covering; provide ventilation to avoid condensation.
   2. Provide surface drainage to prevent runoff or ponded water from damaging stored products.
   3. Prevent damage and contamination from refuse and chemically injurious materials and liquids.
   4. Store fabricated products on substantial platforms, blocking, or skids above the ground, sloped to drain.

END OF SECTION 016000

SECTION 017000-CONSTRUCTION PROCEDURES

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SUMMARY

A. Section Includes:
   1. General construction and installation procedures.
   2. Cleaning during construction.
   3. Final cleaning.
   4. Project completion procedures.

1.3 DEFINITIONS

A. Concealed Spaces: Spaces which are not accessible after completion of construction.

B. Cutting: Removal of material by cutting, sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation.

C. Damage: Any sort of deterioration whether due to weather, normal wear and tear, accident, or abuse, resulting in soiling, marring, breakage, corrosion, rotting, or impairment of function.

D. Debris: Rubbish, waste materials, litter, volatile wastes, and similar materials, with the exception of surplus materials which are to become the property of the Owner.

E. Patching: Restoration to completed condition by patching, repairing, refinishing, finishing, filling, closing up, and similar operations.
   1. Name, title, and signature of person observing demonstration.

1.4 QUALITY ASSURANCE

A. Cleaning: Perform cleaning in accordance with the recommendations of the manufacturer or fabricator of the product or system. Use only cleaning materials and tools which are specifically recommended, which are not hazardous to health or property, and which will not damage finishes.

B. Building materials made of organic material or those that could absorb moisture shall be protected in transit and at the construction site from contact with moisture and from collecting organic matter such as leaves, soil or insects.

C. The building envelope shall be weather-tight and permitted to dry before installation of interior walls, flooring, ceilings or HVAC systems.

1.5 PROJECT CONDITIONS

A. Take precautions to prevent fires and to facilitate fire-fighting operations.
   1. Keep flammable materials in non-combustible containers; store away from potential fire sources; remove flammable waste regularly.
   2. Keep temporary and permanent fire fighting facilities readily accessible; keep fire fighting routes open.
   3. No smoking is permitted on Project site.
   4. Carefully supervise the operation of potential fire sources, including heating units.
   5. Conduct welding operations in manner to prevent fire; comply with local regulations.

B. Take precautions to prevent accidents due to physical hazards:
   1. Provide barricades, warning lights, or signs as required to inform personnel and the public of the hazard being protected against.
   2. Safety barricades: Comply with regulations.
   3. Provide temporary walkways where walking surfaces are hazardous.
   4. Notify the Owner before beginning work that involves hazardous operations no explosives nor the like are permitted.

C. Take care to prevent pollution of air, water, and soil.
   1. Comply with environmental protection regulations.
   2. Limit effluent and rainwater runoff into waterways as required by governing regulations.
   3. Do not dump contaminants in areas that will result in contamination of waterways.

D. Provide an Environmental Management System Plan to include:
   1. General Contractor’s Environmental Policy.
   2. Regulatory compliance Training.
   3. Environmental Risk Assessment that shows sensitive environmental areas and ranks potential risks that may arise from the construction.
   4. Environmental Risk Management Strategies.
   5. Environmental Management roles, responsibilities and reporting structure for the construction phase.
   6. Site and work instructions for site personnel out lining environmental procedures during construction.
   7. Environmental Inspection Checklists
   8. Records of Compliance
   9. Idle reduction strategies
   10. Use of clean/ alternative fuels
   11. Engine upgrades that reduce emissions
   12. Engine maintenance records

E. Minimize discharge of effluent and rainwater runoff into sewers.
   1. Control sediment discharge into sewers; filter out construction debris, soil, and contaminants.
   2. Comply with regulations and orders of public utilities regarding use of sewers.
   3. Where disposal of effluent or rainwater by means of sewers is not lawful or is not possible, provide alternative methods of disposal.

F. Prevent erosion due to rainwater runoff.

G. Control windblown dust; prevent erosion to site and nuisance to neighbors.

H. Prevent flooding of excavations, below-grade construction, and adjacent properties due to rainwater runoff or ground water.

I. Do not use tools or equipment which produce harmful levels of noise.
   1. Do not use noise-making tools or equipment between 8 PM and 7 AM weekdays, all day weekends and holidays and any other times restricted by local ordinance.

J. Keep the site and adjacent public ways free of hazardous and unsanitary conditions and public nuisances.

K. Control rodents and other pests; prevent infestation of adjacent sites and buildings due to pests on this site.

L. Keep public streets free of debris due to this work.

M. Provide adequate traffic control by means of signs, signals, and flagmen, as necessary.

N. Provide temporary means of draining roofs where required.

O. Conduct construction operations so that no part of the work and no part of the existing construction is subjected to damaging operations or influences which are in excess of those to be expected during normal occupancy conditions.

P. Conduct construction operations so that waste of power, water, and fuel is avoided.

Q. Provide temporary supports as required to prevent movement and structural failure.

1.4 SEQUENCING AND SCHEDULING

A. Coordinate required administrative and building occupancy activities with related construction activities.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Patching Materials: Identical to the materials of the work to be cut, unless indicated as specific materials specified in other sections.
   1. For exposed materials for closing up openings, use materials identical to those of the adjacent construction; concealed materials are not required to be identical.
   2. If identical materials are not available or cannot be used, use materials that provide best visual match; obtain approval of the Architect.
   3. Use materials that perform equally as well as, or better than, the material cut.
   4. If necessary, determine composition of existing materials to be patched by testing.

PART 3 - EXECUTION

3.1 GENERAL EXAMINATION REQUIREMENTS

A. Prior to performing work, examine the applicable substrates and the conditions under which the work is to be performed.

B. If unsafe or otherwise unsatisfactory conditions are encountered, take corrective action before proceeding.
   1. If the conditions to be corrected involve the work of another prime contract, notify the Architect promptly.

C. Conditions which could have been discovered by examination will not be allowed as cause for claims for extra work.

D. Notify the Architect promptly of any modifications required due to existing conditions or previous work.

E. Before starting work which might affect existing construction, verify the existence and location of such construction.
   1. In particular, verify the following:
      a. Underground utilities.
      b. Other underground construction.
      c. Location and invert elevation of points of connection to piped utilities.

F. Verify that utility requirements of operating equipment are compatible with building utilities.

G. Verify space requirements of items which are shown diagrammatically on the drawings.

3.2 GENERAL PREPARATION REQUIREMENTS

A. Take field measurements as required to fit the work properly.

B. Recheck measurements prior to installing each product.

3.3 GENERAL INSTALLATION PROCEDURES

A. Accurately locate the work and components of the work; make vertical work plumb; make horizontal work level.

B. See sections describing specific parts of the work for additional requirements.

C. Where space is limited, install components to maximize space available for maintenance and to maximize ease of removal for replacement.

D. In finished areas, conceal pipes, ducts, and wiring within the construction, unless otherwise indicated.

E. Coordinate exact locations of fixtures and outlets with finish elements.

F. Install work in such manner and sequence as to preclude, if possible, or at least to minimize, cutting and patching.

G. Existing Construction:
   1. Perform work in existing construction in same manner as for new construction unless otherwise specified.
   2. Where a new surface exposed to view is an extension of any existing surface, align both surfaces without a change of plane and make a neat transition between finishes.
      a. If a change of plane is necessary due to the configuration of the existing surface, terminate the existing surface and its finish along a straight line at a natural line of division.
   3. Where portions of existing work are removed, patch remaining work with neat transitions between remaining surfaces without evidence of cutting.
      a. Where neat transitions between remaining surfaces are not possible due to configuration of existing surfaces, obtain instructions from the Architect.
   4. Where existing construction is removed, remove existing utility services located within or upon the existing construction.
      a. Cap cut ends of abandoned piping, conduit, and duct in such a manner that they are air tight and concealed in finish work.

3.4 CLEANING AND PROTECTION

A. Remove debris from concealed spaces prior to enclosing the space.

B. Keep the site and the work free of waste materials and debris.
   1. Remove waste from site weekly and as required in Special Requirements.
   2. When temperature exceeds or is expected to exceed 80 degrees F, remove waste at frequency necessary to prevent development of health hazards and nuisance odors.
   3. Keep hazardous and unsanitary materials in containers separate from other waste.

C. Clean areas in which work is to be done to level of cleanliness necessary for proper execution of that work.
   1. Where dust would impair execution of work, broom- and vacuum-clean the entire interior area and keep clean.

D. Keep installed work clean, and clean again when soiled by other operations.
   1. Provide periodic cleaning as required to prevent damage due to soiling.
   2. Remove liquid spills promptly.

E. Protect installed work from soiling and damage.
   1. Provide protective coverings as required.
   2. Provide protective coverings for work which may be damaged by subsequent operations.
   3. Where heavy abuse is expected, use minimum of plywood for protection.
   4. Maintain protective coverings until substantial completion.

3.5 CUTTING AND PATCHING PROCEDURES

A. Existing Construction:
   1. Do not cut existing mechanical and electrical services which are to remain in use until provisions have been made to relocate or reconnect them within the time limits specified elsewhere.

3.6 INSTALLATION OF COMPONENTS

A. Install all products in accordance with manufacturer's instructions and recommendations, whether conveyed in writing or not.

B. Mounting Heights: Where mounting heights are not indicated, mount at heights required by governing regulations or as directed by the Architect.

C. Separate incompatible materials with suitable materials or spacing.
   1. Prevent cathodic corrosion.

D. Provide all anchors and fasteners required and use methods necessary to securely fasten work.
   1. Allow for thermal expansion and contraction, and for building movement.

E. Joints in Exposed Work:
   1. Make joints of uniform widths.
   2. Where joint locations are not indicated, arrange joints for the best visual effect.
      a. When in doubt, obtain the Architect's instructions.

F. After installation, adjust operating components to proper operation.

3.7 EXISTING HAZARDOUS MATERIAL PROCEDURES

A. Asbestos may be found in the existing building.
   1. Do not cut any material that is suspected of being asbestos.
   2. If material to be cut is suspected of being asbestos, immediately stop work on it and notify the Owner.
   3. Determination of hazard will be made by others at no cost to the Contractor.
   4. Removal of asbestos will be accomplished by others under separate contract with Owner.

3.8 FACILITY STARTUP

A. Put each item of equipment and each system into full, satisfactory operation.

B. Prior to Startup:
   1. Verify that equipment and systems are complete, correctly connected to utilities, and tested.
      a. Comply with requirements of manufacturer.
   2. Inspect and test as required to ensure that work is installed as specified and to determine suitability for energizing.
   3. Provide power and fuel for startup and testing.

4. Change over from temporary to permanent utility sources.
5. Re-adjust and lubricate operating components as required to ensure smooth and unhindered operation.
   a. Check drive rotations, belt tension, control sequences, and other features which might cause damage if not properly adjusted.
6. When specified or when required by manufacturer, have manufacturer's representative prepare for startup or supervise such preparation.

C. Notify the Architect 10 days prior to startup of each item and system.

D. Execute startup under supervision of responsible personnel in accordance with the manufacturer's instructions.
   1. When specified or when required by manufacturer, have manufacturer's representative perform startup.
   2. Submit a written report of startup operation.

E. After startup, adjust equipment and systems as required for proper operation.
   1. Where specified, perform tests or inspections to determine status of operation.

F. Demonstrate the operation of equipment and systems to the Architect during the inspection for substantial completion.
   1. Have final operating and maintenance data available during demonstration.

G. For equipment and systems which have different operation at different seasons, demonstrate operation during subsequent seasons until fully demonstrated.

H. See Section 017900 for additional requirements regarding Demonstration and Training.

3.9 FINAL CLEANING

A. Each Prime Contractor shall perform cleaning as it relates to his area of work.
   1. Dust and wash all electrical and mechanical equipment and fixtures.

B. The general work Contractor shall perform all final cleaning after work of other trades is completed and immediately before turning Work over to the Owner.

C. Remove materials and equipment which are not part of the work and all debris from the site prior to substantial completion.
   1. Remove all surplus materials which are to remain property of the Contractor; obtain the Owner's instructions as to disposition of surplus material remaining on site and deliver, store, or dispose of as directed.
   2. Remove protective coverings.
   3. Remove temporary facilities.

D. Dispose of debris in a lawful manner.
   1. Do not burn or bury debris on the site.
   2. Do not dispose of volatile wastes in storm or sanitary drains.

E. Perform final cleaning for entire project site and grounds after substantial completion has been certified, but before final payment. Facility to be cleaned to Owner's satisfaction.
   1. Broom clean paved areas.
   2. Remove snow and ice from building and site accesses.
   3. Dust all walls and ceilings.
   4. Sweep and wash flooring.
   5. Clean door and window frames and glass.
   6. Clean all fixtures and toilet accessories.

F. Remove debris from roofs, gutters, downspouts, and roof drains.

G. Remove paint and other coatings from permanent labels and from mechanical and electrical equipment nameplates. Remove all tags and stickers except those giving operating instructions or safety cautions.

H. Leave the project clean and ready for occupancy.

3.10 PROJECT COMPLETION PROCEDURES

A. Substantial Completion

1. When the Prime Contractor considers the work to be substantially complete, he shall submit to the Architect.
   a. Written notice that the work, or designated portion thereof, is substantially complete.
   b. A list of items to be completed and/or corrected ("punch list").
   c. Record drawings, maintenance manuals and similar final record information.
   d. Deliver tools, spare parts, extra stock, and similar items.
   e. Make final change-over of permanent locks and transmit keys to the Owner.
   f. Complete start-up testing of systems, and instruction of the Owner's maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups and similar elements.
   g. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

2. Within a reasonable time after receipt of such notice the Architect determines the status of completion and if necessary, shall add to the contractors punch list.

3. Should the Architect determine that the work is not substantially complete:
   a. The Architect will notify the Contractor, in writing.
   b. Contractor shall remedy the deficiencies in the work and send a second written notice of substantial completion.
   c. The Architect will review the work.

4. When the Architect concurs that the work is substantially complete, he will:
   a. Prepare a Certificate of Substantial Completion (A.I.A Form G704) accompanied by Contractor's list of items to be completed or corrected as verified and amended by the Architect.

B. Final Inspection
   1. When the Contractor considers the work complete, submit the following to the Architect:
      a. Written certification that Contract Documents have been reviewed, Work has been inspected and completed in accordance with Contract documents.
      b. Statement that equipment and systems have been tested in the presence of the Owner' Representative and are operational.
      c. Certified copy of punch lists, stating that each item has been completed or otherwise resolved for acceptance.

   2. The Architect will make an inspection to verify the status of completion with reasonable promptness after receipt of such certification.

   3. Should the Architect consider that work is incomplete or defective:
      a. The Architect will promptly notify the Contractor in writing, listing the incomplete or defective work.
      b. Contractor shall take immediate steps to remedy the stated deficiencies, and send a second written certification to the Architect that work is complete.
      c. The Architect will re-inspect the work and re-inspection fee will be charged against his account.

   4. When the Architect finds that the work is acceptable under the Contract documents, he shall request that contractor to make closeout submittals.

C. Reinspection Fee
   1. If the Architect must perform more than two reviews due to failure of the work to comply with the claims of status of completion made by the Prime Contractor.
      a. Owner will compensate the Architect for such additional services.
      b. Owner will deduct the amount of such compensation from the final payment to the Contractor.

D. Contractor's Closeout Submittals To Architect
   1. Evidence of Compliance with Requirements of Governing Authorities.
      a. Certificate of Occupancy.
      b. Certificates of Inspections:
         1. General Construction
         2. Mechanical
         3. Electrical
         4. Fire Marshall
   2. Operating and Maintenance Data and Instructions to Owner's personnel.
   3. Warranties and Bonds.
   4. Spare Parts and Maintenance Materials.
   5. Contractor's Affidavit of Payment and Debts and Claims (A.I.A) Form G706) and Contractor's Affidavit of Release of Liens (A.I.A Form G706A): (Forms to be secured by Contractor).
   6. Final contractors or subcontractors Weekly Payroll Certifications for public works project (Pennsylvania Department of Labor & Industry, L&I Form 128 REV-588).
   7. Consent of Surety Company to final payment (A.I.A. Form G707). Forms to be secured by Contractor).

E. Final Adjustment Of Accounts

1. Submit a final statement of accounting to the Architect.
2. Statement shall reflect all adjustments to the Contract Sum.
   a. The Original Contract Sum
   b. Additions and deductions resulting from:
      1) Previous Change Orders.
      2) Unit Prices.
      3) Deductions form uncorrected work.
      4) Deductions for liquidated damages.
      5) Deductions for reinspection payment.
      6) Other adjustments.
   c. Total Contract Sum, as adjusted.
   d. Previous Payments.
   e. Sum remaining due.
3. The Architect then will prepare a Change Order, reflecting adjustments to the Contract sum which were not previously made by Change Orders.

F. Final Application For Payment

A. Contractor shall submit the Final Application for Payment in accordance with procedures and requirements stated in the Conditions of the Contract.

END OF SECTION 017000

SECTION 017823 - OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Emergency manuals.
3. Operation manuals for systems, subsystems, and equipment.
4. Product maintenance manuals.
5. Systems and equipment maintenance manuals.

B. Related Requirements:
1. Section 013000 "Submittal Procedures" for submitting copies of submittals for operation and maintenance manuals.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 CLOSEOUT SUBMITTALS

A. Manual Content: Operations and maintenance manual content is specified in individual Specification Sections to be reviewed at the time of Section submittals. Submit reviewed manual content formatted and organized as required by this Section.

1. Architect and Commissioning Authority will comment on whether content of operations and maintenance submittals are acceptable.
2. Where applicable, clarify and update reviewed manual content to correspond to revisions and field conditions.

B. Format: Submit operations and maintenance manuals in the following format:

1. PDF electronic file. Assemble each manual into a composite electronically indexed file. Submit two copies in PDF format as acceptable to Architect.

a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
b. Enable inserted reviewer comments on draft submittals.

2. One paper copy. Include a complete operation and maintenance directory. Enclose title pages and directories in clear plastic sleeves. Architect will return two copies.

C. Initial Manual Submittal: Submit draft copy of each manual at least 30 days before commencing demonstration and training. Architect and Commissioning Authority will comment on whether general scope and content of manual are acceptable.

D. Final Manual Submittal: Submit each manual in final form prior to requesting inspection for Substantial Completion and at least 15 days before commencing demonstration and training. Architect and Commissioning Authority will return copy with comments.

1. Correct or revise each manual to comply with Architect's and Commissioning Authority's comments. Submit copies of each corrected manual within 15 days of receipt of Architect's and Commissioning Authority's comments and prior to commencing demonstration and training.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Directory: Prepare a single, comprehensive directory of emergency, operation, and maintenance data and materials, listing items and their location to facilitate ready access to desired information. Include a section in the directory for each of the following:

1. List of documents.
2. List of systems.
3. List of equipment.
4. Table of contents.

B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 REQUIREMENTS FOR EMERGENCY, OPERATION, AND MAINTENANCE MANUALS

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name and contact information for Contractor.
6. Name and contact information for Architect.
7. Name and contact information for Commissioning Authority.
8. Names and contact information for major consultants to the Architect that designed the systems contained in the manuals.
9. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual type required.

1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.
2. File Names and Bookmarks: Enable bookmarking of individual documents based on file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory and table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel on opening file.

F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch (215-by-280-mm) paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

    a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
    b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents, and indicate Specification Section number on bottom of spine. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section of the manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch (215-by-280-mm) white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

    a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
    b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 EMERGENCY MANUALS

A. Content: Organize manual into a separate section for each of the following:

1. Type of emergency.
2. Emergency instructions.
3. Emergency procedures.

B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:

1. Fire.
2. Flood.
3. Gas leak.
4. Water leak.
5. Power failure.
6. Water outage.

7. System, subsystem, or equipment failure.
8. Chemical release or spill.

C. Emergency Instructions: Describe and explain warnings, trouble indications, error messages, and similar codes and signals. Include responsibilities of Owner's operating personnel for notification of Installer, supplier, and manufacturer to maintain warranties.

D. Emergency Procedures: Include the following, as applicable:

1. Instructions on stopping.
2. Shutdown instructions for each type of emergency.
3. Operating instructions for conditions outside normal operating limits.
4. Required sequences for electric or electronic systems.
5. Special operating instructions and procedures.

2.4 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions. Use designations for systems and equipment indicated on Contract Documents.
2. Performance and design criteria if Contractor has delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.
6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:

1. Product name and model number. Use designations for products indicated on Contract Documents, and included in the processed submittals.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.

4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.5 PRODUCT MAINTENANCE MANUALS

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.
5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.6 SYSTEMS AND EQUIPMENT MAINTENANCE MANUALS

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual and drawing or schedule designation or identifier where applicable.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training video recording, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION

A. Operation and Maintenance Documentation Directory: Prepare a separate manual that provides an organized reference to emergency, operation, and maintenance manuals.

B. Emergency Manual: Assemble a complete set of emergency information indicating procedures for use by emergency personnel and by Owner's operating personnel for types of emergencies indicated.

C. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

D. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

E. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

F. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in record Drawings to ensure correct illustration of completed installation.

1. Do not use original project record documents as part of operation and maintenance manuals.
2. Comply with requirements of newly prepared record Drawings in Section 017839 "Project Record Documents."

G. Comply with Section 017700 "Closeout Procedures" for schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 018000 - PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 SUMMARY

A. Section Includes Project Record drawings.

B. Refer to Construction Procedures (project completion procedures) in Division 1.

1.3 SUBMITTALS

A. Project Record Documents: Submit prior to substantial completion.

1. Record drawings: Submit in form of PDF As-Builts.
   a. Submit original marked-up print set.
   b. Sets shall include all drawings, whether changed or not.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 MAINTENANCE OF PROJECT RECORD DOCUMENTS

A. Do not use record documents of any type for construction purposes.

B. Maintain record documents in a secure location at the site while providing for access by the Contractor and the Architect during normal working hours.

C. Record information as soon as possible after it is obtained.

D. Assign a person or persons responsible for maintaining record documents.

E. Record the following types of information on all applicable record documents:

1. Dimensional changes.
2. New and revised details.
3. Depths of foundations.
4. Actual routings of piping and conduits.
5. Locations of utilities concealed in construction or underground.
6. Particulars on concealed products which will not be easy to identify later.
7. Changes made by modifications to the contract; note identification numbers if applicable.
8. New information which may be useful to the Owner, but which was not shown in either the contract documents or submittals.

3.2 RECORD DRAWINGS

A. Contractor shall maintain a complete set of opaque prints of the contract drawings, marked to show changes which occur due to his work.

B. Where the actual work differs from that shown on the drawings, mark this set to show the actual work.

1. Mark location of concealed items before they are covered by other work.
2. Mark either record contract drawings or shop drawings, whichever are best suited to show the change.

C. When the Contractor is required by a provision of a modification to prepare a new drawing, rather than to revise existing drawings, obtain instructions from the Architect as to the drawing scale and information required.

D. Keep drawings in labelled, bound sets. Incorporate new drawings into existing sets, as they are issued.

E. Contractor shall retain one (1) set of the prints from the contract drawings provided for transferring and recording all changes to the contracted work including differences in actual existing conditions and new work installed.

F. Where record drawings are also required as part of operation and maintenance data submittals, make copies from the original record drawing set.

3.3 TRANSMITTAL TO OWNER

A. Collect, organize, and label for reference.

1. Bind print sets with durable paper covers.
2. Label each document (and each sheet of drawings) with "PROJECT RECORD DOCUMENTS - This document has been prepared using information furnished by _____" [insert the Contractor's name], and the date of preparation.

B. Submit to the Architect for transmittal to the Owner, unless otherwise indicated.

END OF SECTION 018000

SECTION 019000- SPECIAL REQUIREMENTS

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

1.2 DEFINITIONS OF TERMS: Shall be as follows:

A. Owner: Marple Newtown School District, 40 Media Line Road, Newtown Square, PA 19073 shall also be herein referred to as “School District”.

B. Architect: BONNETT MEDICA ASSOCIATES INCORPORATED, 1242 West Chester Pike, Upper Floor, Suite 11, West Chester, PA 19382 retained by OWNER to prepare Bidding Documents and perform other services as required by OWNER. Responsibility of BONNETT MEDICA ASSOCIATES INCORPORATED is directly to OWNER and they shall not be party to Contract in any way or form.

C. Contractor: Contractor for Work defined in SUMMARY OF THE WORK, Section 01010 and referred to throughout Contract Documents as Contractor, Subcontractor, Subcontractor's Subcontractor, or Materials Supplier.

1.3 GLOSSARY OF TERMS

A. Abbreviations for names of technical societies, organizations and agencies referenced by Contract Documents shall be interpreted as follows:

AA	The Aluminum Association
AAA	American Arbitration Association
AABC	Associated Air Balance Council
AAMA	Architectural Aluminum Manufacturers Association
AAN	American Association of Nurserymen, Inc.
AASHO	American Association of State Highway Officials
ACI	American Concrete Institute
ACI	American Carpet Institute
ACPA	American Concrete Pipe Association
ACPA	American Concrete Paving Association
ACS	American Chemical Society
AFMA	Access Floor Manufacturers Association
AGA	American Gas Association
AGC	Associated General Contractors of America
AHDGA	American Hot-Dip Glavanizers Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AIA	American Insurance Association
AIEE	American Institute of Electrical Engineers
AIMA	Acoustical and Insulating Materials Association (Formerly Acoustical Materials Association AMA
AISC	American Institute of Steel Construction, Inc.
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AJCHN	American Joint Committee on Horticultural Nomenclature

ANSI	American National Standards Institute (Formerly United States of America Standards Association USAS and American Standards Association ASA
AOCA	Association of Official Agricultural Chemists
APA	American Parquet Association, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ARBA	American Road Builders Association
AREA	American Railroad Engineers Association
ASA	Acoustical Society of America
ASAHC	American Society of Architectural Hardware Consultants
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
AVATI	Asphalt and Vinyl Asbestos Tile Institute
AWC	American Wood Council
AWMA	American Walnut Manufacturers Association
AWPA	The American Wood Preservers' Association
AWPI	American Wood Preservers' Institute
AWS	American Welding Society, Inc.
AWWA	American Water Words Association
BOCA	Building Officials Conference of America, Inc.
BRI	Building Research Institute
BSI	Building Stone Institute
CBM	Certified Ballast Manufacturers
CLFMI	Chain Line Fence Manufacturers Institute
CPI	Clay Pipe Institute
CRSI	Concrete Reinforcing Steel Institute
CRA	California Redwood Association
CRI	Carpet and Rug Institute
CS	Commercial Standards (U.S. Gov't.)
CSI	Construction Specifications Institute
EEI	Edison Electric Institute
EIA	Electronics Industries Association
EJMA	Expansion Joint Manufacturers Association
ETL	Electrical Testing Laboratories, Inc.
FGJA	Flat Glass Jobbers Association
FGMA	Flat Glass Marketing Association
FIA	Factory Insurance Association
FM	Factory Mutual
FS	Federal Specifications (U.S. Gov't.)
FTI	Facing Tile Institute
GA	Gypsum Association
GDCA	Gypsum Drywall Contractors Association
GDCI	Gypsum Drywall Contractors International
GRDF	Gypsum Roof Deck Foundation
HPACCNA	Heating, Piping and Air Conditioning Contractors National Association
HPMA	Hardwood Plywood Manufacturers Association
HRE	Highway Research Board
IBI	Insulation Board Institute
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineering Society
ILIA	Indiana Limestone Institute of America, Inc.

IPCEA	Insulated Power Cable Engineers Association
ITE	Institute of Traffic Engineers
LAPA	Lightweight Aggregate Producers Association
LIA	Lead Industries Association, Incorporated
MFMA	Maple Flooring Manufacturers Association
MIA	Marble Institute of America
MLA	Metal Lath Association
MLMA	Metal Lath Manufacturers Association
M-SI	Mo-Sai Institute, Inc.
MSS	Manufacturers Standardization Society
NAAMM	National Association of Architectural Metal Manufacturers
NAFM	National Association of Architectural Metal Manufacturers
NBHA	National Builders Hardware Association
NBS	National Bureau of Standards (U.S. Gov't.)
NCMA	National Concrete Masonry Association
NCPWB	National Certified Pipe Welding Bureau
NEC	National Electric Code
NECA	National Electrical Contractors Association
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NLA	National Lime Association
NLI	National Limestone Institute
NOFMA	National Oak Flooring Manufacturers Association
NPA	National Particle board Association
NSA	National Slag Association
NSF	National Sanitary Foundation
NRMCA	National Ready Mixed Concrete Association
NTMA	National Terrazzo and Mosaic Foundation
NWMA	National Woodwork Manufacturers Association
NSPE	National Society of Professional Engineers
OSHA	Occupational Safety and Health Administration, U.S. Dept. of Labor
PCA	Portland Cement Association
PCI	Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PEI	Porcelain Enamel Institute
PI	Perlite Institute, Incorporated
PPT	Piping Promotional Trust
RCSB	Red Cedar Shingle and Hand Split Shake Bureau
SBC	Southern Building Code
SBTMA	Southern Brick and Tile Manufacturers Association
SCPI	Structural Clay Products Institute
SDI	Steel Deck Institute
SDI	Steel Door Institute
SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SPA	Southern Pine Association
SPIB	Southern Pine Inspection Bureau
SJI	Steel Joint Institute
SSPC	Steel Structures Painting Council
SWAP	Society of American Wood Preservers
SWI	Steel Window Institute
TCA	Tile Council of America, Inc.
UL	Underwriters Laboratories, Inc.
USDA	U. S. Dept. of Agriculture
WCLA	West Coast Lumberman's Association

WCLB	West Coast Lumber Inspection Bureau
WFI	Wood Flooring Institute of America
WIC	Woodwork Institute of California
WRCLA	Western Red Cedar Lumber Association
WWPA	Western Wood Products Association
WWPA	Woven Wire Products Association

1.4 LAYOUT

A. Contractor shall be responsible for correctness of all measurements. Differences between Drawings and field conditions must be submitted to The Architect before proceeding with Work.

1.5 EXISTING CONDITIONS

A. Contractor and/or subcontractors must review Drawings and Project Manual for their own Work as well as that of other trades and visit the Site to observe conditions. No extra payments shall be permitted for failure of Contractors to have knowledge of existing conditions regardless of whether or not existing pipes, conduits, etc., are specifically shown on Drawings, or references concerning same are stated in Project Manual.

1.6 EXAMINATION OF PREPARATORY WORK

A. Before starting Work, Contractor and Subcontractors shall carefully examine all preparatory Work that has been executed to receive this Work. Check carefully, by whatever means are required, to ensure that Work of this Section and adjacent related Work will finish to proper contours, planes and levels. Promptly notify The Architect, any defects or imperfections in preparatory Work which will, in any way, affect satisfactory completion of this Work. Absence of such notification will be construed as an acceptance of preparatory Work and later claims of defects therein will not be recognized.

B. Under no circumstances shall Work of a Section proceed prior to preparatory Work having been completed, cured, dried and/or otherwise made satisfactory to receive this Work. Responsibility for timely installation of all materials rests solely with Contractor, who shall maintain coordination at all times.

1.7 MEASUREMENTS

A. Obtain measurements from parties responsible for other sections of Work and as soon as possible take necessary field measurements and field check dimensions previously obtained so that various parts of Work will fit.

1.8 NOMINAL SIZES

A. Throughout the Project Manual and in notes on Drawings, references are made to nominal, not actual, sizes of commercial materials, such as "4 inch Block", "2 x 4 lumber", "8 inch channels", "12 inch pipe", etc. In all such cases, supply materials in commercial sizes in accordance with recognized standard as intended. Only if accurately dimensioned, or if particularly specified, shall sizes other than usual commercial sizes be required.

1.9 OPENINGS AND ACCESS

A. General Contractor shall provide adequate means of access into building from outside wherever provisions may be necessary for removal of materials and bringing in materials or equipment.

B. General Contractor shall provide all openings, recesses, and chases in building construction, with lintels where required, necessary for installation of general construction.

C. Each Prime contractor shall be responsible for cutting, patching, and supports related to their work, except as otherwise indicated. Prime contractors shall utilize tradesmen qualified to perform the cutting, patching and support work required.

1.10 PATCHING PUBLICLY-OWNED FACILITIES

A. Except for new work required by the Contract Documents, existing publicly-owned structures, facilities, streets, curbs, walks, etc., that are damaged or removed due to required excavations, or other construction Work, shall be patched, repaired or replaced and left in original state to the satisfaction of OWNER, ARCHITECT and authorities having jurisdiction thereover. In the event that such authorities require patching and repairing to be done with their own labor and materials, abide by such regulations and include costs for such Work.

1.11 MUTUAL COORDINATION OF TRADES

A. Contractor and all subcontractors responsible for Work defined by individual Sections of the Specifications shall, jointly and severally, coordinate their various sections of Work as to scheduling, installation procedures, shop drawings and installation of all related materials, so that Work is compatible with other Contractors and does not interfere with Owner's operations.

B. Responsibility for enforcing coordination requirements and close adherence to time schedules rests with each Contractor.

1.12 REFERENCE STANDARDS AND INDUSTRY SPECIFICATIONS

A. Unless otherwise specified, any material or operation specified by reference to published specifications of a manufacturer, society, association, code or other published standard, shall comply with requirements of listed document which is current on date of receipt of bids. In case of a conflict between referenced document and Project Manual, Project Manual shall govern. In case of a conflict between referenced documents, one having more stringent requirements shall govern.

B. Furnish, when requested by Owner or Architect, an affidavit from manufacturer certifying that materials or products delivered to Project meet requirements specified. Such affidavit shall not relieve Contractor from responsibility of complying with any added requirement of Project Manual.

C. When referenced Standard or Industry Specification is mentioned, obtain copies of such Standard or Specification before starting operations. All personnel in charge of operations to be performed in accordance with such Standards or Specifications will be held to have acquainted themselves with all such documents insofar as they may be applicable to Work.

D. In order to define requirements for quality, function, size, gauge, grade and color, etc. Project Manual has been written to describe materials and/or products of first-named manufacturer. This is not intended to preclude possible acceptance and use of equivalent items of other manufacturers named, but only with prior acceptance of The Architect as specified in Product Requirements, Section 016000.

1.13 MATERIALS AND EQUIPMENT

A. Where no specific kind, make or quality of material is given, a first-class standard article as accepted by Owner and Architect shall be furnished.

B. Where any specific material, process, method of construction, or manufactured article is specified by name or by reference to catalog number of a manufacturer, Project Manual is to be used as a guide and is not intended to take precedence over basic duty and performance specified or noted on

Drawings. In all cases, Contractor shall verify duty specified with specific characteristics of equipment offered for approval. Where materials or makes are specified and where words "or equivalent" or "approved equivalent" are not used, only makes specified shall be furnished and installed.

1.14 SUBSTITUTION OF EQUIPMENT AND MATERIAL

A. As specified in Product Requirements Section 016000.

1.15 CONTRACTOR'S PERSONNEL

A. Contractor shall give Work such qualified field supervision and direction as it may require.

B. Each Subcontractor shall have a competent foreman on the job at all times.

C. If any personnel of Contractor or subcontractor performs or conducts himself in a manner which is detrimental to Project, Owner reserves right to request such personnel be removed from Project.

1.16 THEFT

A. Items stolen or damaged at Site after payment by Owner before or after installation by Contractor, remains responsibility of Contractor until final project acceptance by Owner.

1.17 OWNER'S EXISTING ACTIVITIES

A. All personnel, equipment, materials and debris of Contractor, subcontractors, materialmen shall remain clear of Owner's occupancy on site including streets, driveways, parking areas and yards and exit ways. Owner shall be given 48 hours notice prior to any service shutdown or access blockage.

1.18 CLEAN-UP

A. Clean-up and housekeeping of site is responsibility of each prime Contractor and subcontractors. All combustible type items must be removed from building on a daily basis. All trash, debris, and dirt must be cleaned up within a reasonable period of time and removed from job site at no additional charge or inconvenience to Owner. Owner has right to have this enforced, upon written notice to Contractor, by obtaining third party trash services and backcharging Contractor if removal is not being maintained in a reasonable manner.

END OF SECTION 019000

SECTION 019500- CONSTRUCTION SUPERINTENDENT

PART 1 - GENERAL

1.1 REFERENCE TO OTHER PROJECT MANUAL SECTIONS

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

B. All Prime Contractors shall provide a Construction Superintendent, as defined in this Section, for the work under their contract. The Construction Superintendent shall be a full time representative of the Prime contractor. The Construction Superintendent shall devote his/her full attention to the administration and coordination of the work of the prime contract and shall not spend time as a journeyman, mechanic or tradesperson, completing the actual construction work of the prime contract.

1.2 SCOPE OF WORK

A. Listed below is the general description of the duties of a full time Construction Superintendent for this Project.

B. Duties of the Construction Superintendent:

1. Coordinate field personnel and be responsible for compliance with contractual requirements, governing authorities and safety regulations.

2. Provide overall detailed C.P.M. construction schedule including project start and completion dates for trade, including: shop drawing submissions, material delivery dates, and installation duration for each activity.

3. Supervise, direct and coordinate the progress of the various subcontractors performing the construction work to insure timely and efficient construction. Attend coordination meetings weekly.

4. Provide continuous on-site inspection to ensure that the work is being performed in accordance with the construction documents and construction debris is removed from premises.

5. Expedite deliveries of material and equipment, submissions of shop drawings, samples, construction drawings and schedules to insure efficient progress.

6. Administer labor relations problems as required.

7. Arrange for construction inspections and testing services, as required.

8. Coordinate and schedule all field testing, witness tests, record findings and distribute reports.

9. Administer construction on a full time basis including extended hours and/or weekends as required to meet projected construction schedule.

10. Update construction network schedule showing critical dates for the various trades of the project and interface between construction contracts, occurring concurrently. Implement and continue to revise schedule periodically, submitting copies to the Owner and Architect.

11. Direct field personnel to location of project work according to trade sequence to meet target schedule dates.

12. Maintain records of contracts, bulletins, change orders, shop drawings, surveys, reports, studies, meetings, site visits, inspections, and communications.

13. Maintain a record set of as-built changes to the Contract Documents.

14. Maintain daily records indicating site visitors, material deliveries, number of men in each trade, location and description of work being performed, weather conditions, etc. and or reason for work stoppage or delay, if any. On a daily basis, this information shall be recorded on the Daily Work Report 006019 provided in the Project Manual and submitted electronically to the Architect on a daily basis.

15. Coordinate Bulletin and Change requests. Obtain cost information. Record existing conditions which may result in a credit or additional cost to the construction contract.

16. Administer site clean-up, construction safety program, and work area access; maintain field office and sanitary facilities; and coordinate and verify building conditions, equipment, materials and site security and protection in accordance other sections in Division 1.

17. Obtain permits, licenses and certificates, Act 34, 114 and 151 clearances, Certified Payrolls, legally required for construction work.

18. Coordinate project design and maintain daily contact with the Architect during the construction period.

19. Assist with the preparation of a Punch List of Work, prior to Substantial Completion and coordinate and expedite the completion of the Work.

20. Coordinate assembly of operating manuals, equipment manuals, guarantees, releases, certificates and as-built drawings for delivery to the Owner and Architect.

END OF SECTION 019500

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Salvage of existing items to be reused or recycled.

B. Related Requirements:

1. Division 01 for restrictions on the use of the premises, Owner-occupancy requirements, and phasing requirements.
2. Division 01 Section "Cutting and Patching" for cutting and patching procedures.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner as directed.

C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.4 MATERIALS OWNERSHIP

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

1.5 INFORMATIONAL SUBMITTALS

A. Proposed Protection Measures: Submit report, including drawings, that indicates the measures proposed for protecting individuals and property**,** for environmental protection, for dust control and, for noise control. Indicate proposed locations and construction of barriers.

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

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
2. Use of elevator and stairs.
3. Coordination of Owner's continuing occupancy of portions of existing building and of Owner's partial occupancy of completed Work.

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

D. Pre-demolition Photographs or Video: Submit before Work begins.

1.6 CLOSEOUT SUBMITTALS

A. Inventory: Submit a list of items that have been removed and salvaged.

1.7 FIELD CONDITIONS

A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

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

1. Before selective demolition, Owner will move the following items away from area of work:

a. Loose furniture and equipment.

b. Educational and administrative supplies and materials

c. Stored materials.

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

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

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

1. Maintain fire-protection facilities in service during selective demolition operations.

PART 2 - PRODUCTS

2.1 PEFORMANCE REQUIREMENTS

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

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

PART 3 - EXECUTION

3.1 EXAMINATION

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

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

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

D. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or preconstruction videotapes.
   1. Inventory and record the condition of items to be removed and salvaged. Provide photographs or video of conditions that might be misconstrued as damage caused by salvage operations.
   2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

3.2 PREPARATION

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

   1. Comply with requirements for access and protection specified in Division 01 Section "Temporary Facilities and Controls."

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

   1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.

2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
4. Cover and protect furniture, furnishings, and equipment that have not been removed.
5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

3.3 SELECTIVE DEMOLITION, GENERAL

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

1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
8. Dispose of demolished items and materials promptly. Comply with requirements in Division 01.

B. Removed and Salvaged Items:

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

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.

4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

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

3.4 DISPOSAL OF DEMOLISHED MATERIALS

A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
4. Comply with requirements specified in Division 01.

B. Burning: Do not burn demolished materials.

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

3.5 CLEANING

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

END OF SECTION 024119

SECTION 061000 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Wood blocking, cants and nailers.
2. Wood furring and grounds.
3. Plywood backing panels.

1.3 DEFINITIONS

A. Dimension Lumber: Lumber of 2 inches nominal (38 mm actual) or greater but less than 5 inches nominal (114 mm actual) in least dimension.

B. Lumber grading agencies, and the abbreviations used to reference them, include the following:

1. NeLMA: Northeastern Lumber Manufacturers' Association.
2. NLGA: National Lumber Grades Authority.
3. SPIB: The Southern Pine Inspection Bureau.
4. WCLIB: West Coast Lumber Inspection Bureau.
5. WWPA: Western Wood Products Association.

1.4 ACTION SUBMITTALS

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

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.

4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.

1.6 QUALITY ASSURANCE

A. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.7 DELIVERY, STORAGE, AND HANDLING

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

PART 2 - PRODUCTS

2.1 WOOD PRODUCTS, GENERAL

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

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

B. Maximum Moisture Content of Lumber: 15 percent for 2-inch nominal (38-mm actual) thickness or less, 19 percent for more than 2-inch nominal (38-mm actual) thickness unless otherwise indicated.

2.2 WOOD-PRESERVATIVE-TREATED LUMBER

A. Preservative Treatment by Pressure Process: AWPA U1; Use Category UC2 for interior construction not in contact with the ground, Use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.

1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium. Do not use inorganic boron (SBX) for sill plates.

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

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

D. Application: Treat all rough carpentry unless otherwise indicated.

1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
3. Wood framing and furring attached directly to the interior of below-grade exterior masonry or concrete walls.
4. Wood framing members that are less than 18 inches (460 mm) above the ground in crawlspaces or unexcavated areas.
5. Wood floor plates that are installed over concrete slabs-on-grade.

2.3 FIRE-RETARDANT-TREATED MATERIALS

A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.

B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Products with a flame spread index of 25 or less when tested according to ASTM E 84, and with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet (3.2 m) beyond the centerline of the burners at any time during the test.

1. Use treatment that does not promote corrosion of metal fasteners.
2. Exterior Type: Treated materials shall comply with requirements specified above for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.
4. Design Value Adjustment Factors: Treated lumber shall be tested according ASTM D 5664 and design value adjustment factors shall be calculated according to

ASTM D 6841. For enclosed roof framing, framing in attic spaces, and where high temperature fire-retardant treatment is indicated, provide material with adjustment factors of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.

C. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent. Kiln-dry plywood after treatment to a maximum moisture content of 15 percent.

D. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.

1. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by testing agency.

E. Application: Treat all rough carpentry unless otherwise indicated.

1. Framing for raised platforms.
2. Framing for stages.
3. Concealed blocking.
4. Roof construction.
5. Plywood backing panels.

2.4 MISCELLANEOUS LUMBER

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

1. Blocking.
2. Nailers.
3. Cants.
4. Furring.
5. Grounds.

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

1. Hem-fir (north); NLGA.
2. Mixed southern pine; SPIB.
3. Western woods; WCLIB or WWPA.
4. Eastern softwoods; NeLMA.

C. For concealed boards, provide lumber with 15 percent maximum moisture content and any of the following species and grades:

1. Hem-fir or hem-fir (north); Construction or No. 2 Common grade; NLGA, WCLIB, or WWPA.
2. Eastern softwoods; No. 2 Common grade; NeLMA.

D. For blocking not used for attachment of other construction, Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.

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

F. For furring strips for installing plywood or hardboard paneling, select boards with no knots capable of producing bent-over nails and damage to paneling.

2.5 PLYWOOD BACKING PANELS

A. Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

2.6 FASTENERS

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

1. Where rough carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M or of Type 304 stainless steel.

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

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

D. Wood Screws: ASME B18.6.1.

E. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).

F. Bolts: 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.

2.7 MISCELLANEOUS MATERIALS

A. Adhesives for Gluing Furring to Concrete or Masonry: Formulation complying with ASTM D 3498 that is approved for use indicated by adhesive manufacturer.

B. Water-Repellent Preservative: NWWDA-tested and -accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

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

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

C. Install plywood backing panels by fastening to studs; coordinate locations with utilities requiring backing panels. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view.

D. Do not splice structural members between supports unless otherwise indicated.

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

1. Provide metal clips for fastening gypsum board or lath at corners and intersections where framing or blocking does not provide a surface for fastening edges of panels. Space clips not more than 16 inches (406 mm) o.c.

F. Provide fire blocking in furred spaces, stud spaces, and other concealed cavities as indicated and as follows:

1. Fire block furred spaces of walls, at each floor level, at ceiling, and at not more than 96 inches (2438 mm) o.c. with solid wood blocking or noncombustible materials accurately fitted to close furred spaces.
2. Fire block concealed spaces of wood-framed walls and partitions at each floor level, at ceiling line of top story, and at not more than 96 inches (2438 mm) o.c. Where fire blocking is not inherent in framing system used, provide closely fitted solid wood blocks of same width as framing members and 2-inch nominal- (38-mm actual-) thickness.
3. Fire block concealed spaces between floor sleepers with same material as sleepers to limit concealed spaces to not more than 100 sq. ft. (9.3 sq. m) and to solidly fill space below partitions.
4. Fire block concealed spaces behind combustible cornices and exterior trim at not more than 20 feet (6 m) o.c.

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

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

1. Use inorganic boron for items that are continuously protected from liquid water.

2. Use copper naphthenate for items not continuously protected from liquid water.

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

1. NES NER-272 for power-driven fasteners.
2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.
3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

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

3.2 WOOD GROUND, BLOCKING, AND NAILER INSTALLATION

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

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

C. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.

D. Provide permanent grounds of dressed, pressure-preservative-treated, key-beveled lumber not less than 1-1/2 inches (38 mm) wide and of thickness required to bring face of ground to exact thickness of finish material. Remove temporary grounds when no longer required.

3.3 WOOD FURRING INSTALLATION

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

B. Furring to Receive Plywood or Hardboard Paneling: Install 1-by-3-inch nominal- (19-by-63-mm actual-) size furring horizontally and vertically at 24 inches (610 mm)o.c.

C. Furring to Receive Gypsum Board: Install 1-by-2-inch nominal- (19-by-38-mm actual-) size furring vertically at 16 inches (406 mm) o.c.

3.4 PROTECTION

A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION 061000

SECTION 079200 - JOINT SEALANTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

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

1.3 INFORMATIONAL SUBMITTALS

A. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that sealants comply with requirements.

B. Warranties: Sample of special warranties.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

B. Source Limitations: Obtain each kind of joint sealant from single source from 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 (5 deg C).
2. When joint substrates are wet.
3. Where joint widths are less than those allowed by joint-sealant manufacturer for applications indicated.
4. Where contaminants capable of interfering with adhesion have not yet been removed from joint substrates.

1.6 WARRANTY

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

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

B. Special Manufacturer's Warranty: Manufacturer agrees to furnish joint sealants to repair or replace those joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

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

C. Special warranties specified in this article exclude deterioration or failure of joint sealants from the following:

1. Movement of the structure caused by structural settlement or errors attributable to design or construction resulting in stresses on the sealant exceeding sealant manufacturer's written specifications for sealant elongation and compression.
2. Disintegration of joint substrates from natural causes exceeding design specifications.
3. Mechanical damage caused by individuals, tools, or other outside agents.
4. Changes in sealant appearance caused by accumulation of dirt or other atmospheric contaminants.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

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

B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type, grade, class, and uses related to exposure and joint substrates.

1. Suitability for Immersion in Liquids. Where 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. Liquid used for testing sealants is deionized water, unless otherwise indicated.

C. Stain-Test-Response Characteristics: Where 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.

D. Suitability for Contact with Food: Where sealants are indicated for joints that will come in repeated contact with food provide products that comply with 21 CFR 177.2600.

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

2.2 SILICONE JOINT SEALANTS

A. Multicomponent, Nonsag, Neutral-Curing Silicone Joint Sealant: ASTM C 920, Type M, Grade NS, Class 50, for Use NT.

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

a. Tremco Incorporated; Spectrem 4TS.

2.3 LATEX JOINT SEALANTS

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

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

a. BASF Building Systems; Sonolac.
b. Pecora Corporation; AC-20+.
c. Tremco Incorporated; Tremflex 834.
d. Sherwin Williams 950A Siliconized Acrylic Latex Caulk

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, 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. Masonry.
c. Unglazed surfaces of ceramic tile.
d. Exterior insulation and finish systems.

3. Remove laitance and form-release agents from concrete.

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

D. 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.

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

1. Remove excess sealant from surfaces adjacent to joints.
2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
4. Provide flush joint profile where indicated per Figure 8B in ASTM C 1193.
5. Provide recessed joint configuration of recess depth and at locations indicated per Figure 8C in ASTM C 1193.

3.4 CLEANING

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

3.5 PROTECTION

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

3.6 JOINT-SEALANT SCHEDULE

A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal non-traffic surfaces.

1. Joint Locations:
   a. Perimeter joints between materials listed above and frames of doors, windows and louvers.

2. Silicone Joint Sealant: Multicomponent, nonsag, neutral curing.
3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of available colors.

B. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal non-traffic surfaces.

1. Joint Locations:
   a. Perimeter joints between interior wall surfaces and frames of interior doors.

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

END OF SECTION 079200

SECTION 081113 - HOLLOW METAL DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes hollow-metal work.

B. Related Requirements:

1. Section 087110 "Door Hardware" for door hardware for hollow-metal doors.

1.3 DEFINITIONS

A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.4 COORDINATION

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

1.5 INFORMATIONAL SUBMITTALS

A. Product Test Reports: For each type of hollow-metal door and frame assembly, for tests performed by a qualified testing agency.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver hollow-metal work palletized, packaged, or crated to provide protection during transit and Project-site storage. Do not use non-vented plastic.

1. Provide additional protection to prevent damage to factory-finished units.

B. Deliver welded frames with two removable spreader bars across bottom of frames, tack welded to jambs and mullions.

C. Store hollow-metal work vertically under cover at Project site with head up. Place on minimum 4-inch- (102-mm-) high wood blocking. Provide minimum 1/4-inch (6-mm) space between each stacked door to permit air circulation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Amweld International, LLC.
2. Pioneer Industries, Inc.
3. Republic Doors and Frames.
4. Steelcraft; an Ingersoll-Rand company.
5. Curries: an Assa Abloy company.

B. Source Limitations: Obtain hollow-metal work from single source from single manufacturer.

2.2 REGULATORY REQUIREMENTS

A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

1. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.

2.3 EXTERIOR HOLLOW-METAL DOORS AND FRAMES

A. Construct exterior doors and frames to comply with the standards indicated for materials, fabrication, hardware locations, hardware reinforcement, tolerances, and clearances, and as specified.

B. Heavy-Duty Doors and Frames: SDI A250.8, Level 2. At locations indicated in the Door and Frame Schedule

1. Physical Performance: Level B according to SDI A250.4. 18 gage.
2. Doors:

a. Type: As indicated in the Door and Frame Schedule.
b. Thickness: 1-3/4 inches (44.5 mm.)
c. Face: Metallic-coated steel sheet, minimum thickness of 0.0478 inch (1.214 mm), with minimum A40 (ZF120) coating.
d. Edge Construction: Model 1, Full Flush.
e. Core: Vertical steel stiffener.

f. Thermal-Rated Doors: Provide doors fabricated with thermal-resistance value (R-value) of not less than 2.1 deg F x h x sq. ft./Btu (0.370 K x sq. m/W) when tested according to ASTM C 1363.

3. Frames:

a. Materials: Metallic-coated steel sheet, minimum thickness of 0.053 inch (1.3 mm), with minimum A40 (ZF120) coating.
b. Construction: Full profile welded.

4. Exposed Finish: Prime.

2.4 MATERIALS

A. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B; suitable for exposed applications.

B. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

C. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, Commercial Steel (CS), Type B.

D. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.

E. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hollow-metal frames of type indicated.

F. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

G. Mineral-Fiber Insulation: ASTM C 665, Type I (blankets without membrane facing); consisting of fibers manufactured from slag or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively; passing ASTM E 136 for combustion characteristics.

H. Glazing: Comply with requirements in Section 088000 "Glazing."

I. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

2.5 FABRICATION

A. Fabricate hollow-metal work to be rigid and free of defects, warp, or buckle. Accurately form metal to required sizes and profiles, with minimum radius for metal thickness. Where practical, fit and assemble units in manufacturer's plant. To ensure proper assembly at Project site, clearly identify work that cannot be permanently factory assembled before shipment.

B. Hollow-Metal Doors:

1. Fire Door Cores: As required to provide fire-protection and temperature-rise ratings indicated.
2. Vertical Edges for Single-Acting Doors: Bevel edges 1/8 inch in 2 inches (3.2 mm in 51 mm)
3. Top Edge Closures: Close top edges of doors with flush closures of same material as face sheets.
4. Bottom Edge Closures: Close bottom edges of doors where required for attachment of weather stripping with end closures or channels of same material as face sheets.
5. Exterior Doors: Provide weep-hole openings in bottoms of exterior doors to permit moisture to escape. Seal joints in top edges of doors against water penetration.
6. Astragals: Provide overlapping astragal on one leaf of pairs of doors where required by NFPA 80 for fire-performance rating or where indicated. Extend minimum 3/4 inch (19 mm) beyond edge of door on which astragal is mounted or as required to comply with published listing of qualified testing agency.

C. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.

1. Provide countersunk, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.

D. Fabricate concealed stiffeners and edge channels from either cold- or hot-rolled steel sheet.

E. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.

1. Reinforce doors and frames to receive non-templated, mortised, and surface-mounted door hardware.
2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

F. Stops and Moldings: Provide stops and moldings around glazed lites and louvers where indicated. Form corners of stops and moldings with mitered hairline joints.

1. Provide fixed frame moldings on outside of exterior and on secure side of interior doors and frames.
2. Provide loose stops and moldings on inside of hollow-metal work.
3. Coordinate rabbet width between fixed and removable stops with glazing and installation types indicated.

2.6 STEEL FINISHES

A. Prime Finish: Clean, pre-treat, and apply manufacturer's standard primer.

1. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.

PART 3 - EXECUTION

3.1 EXAMINATION

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

B. Examine roughing-in for embedded and built-in anchors to verify actual locations before frame installation.

C. Prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

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

3.2 PREPARATION

A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces.

B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

3.3 INSTALLATION

A. General: Install hollow-metal work plumb, rigid, properly aligned, and securely fastened in place. Comply with Drawings and manufacturer's written instructions.

B. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.

1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.

a. At fire-rated openings, install frames according to NFPA 80.
b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.

c. Remove temporary braces necessary for installation only after frames have been properly set and secured.
d. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
e. Field apply bituminous coating to backs of frames that will be filled with grout containing antifreezing agents.

2. Metal-Stud Partitions: Solidly pack mineral-fiber insulation inside frames.
3. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout.
4. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
5. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:

a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.

C. Hollow-Metal Doors: Fit hollow-metal doors accurately in frames, within clearances specified below. Shim as necessary.

1. Non-Fire-Rated Steel Doors:

a. Between Door and Frame Jambs and Head: 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm).
b. Between Edges of Pairs of Doors: 1/8 inch (3.2 mm) plus or minus 1/32 inch (0.8 mm).
c. At Bottom of Door: 3/4 inch (19.1 mm) plus or minus 1/32 inch (0.8 mm).
d. Between Door Face and Stop: 1/16 inch (1.6 mm) plus or minus 1/32 inch (0.8 mm).

2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
3. Smoke-Control Doors: Install doors and gaskets according to NFPA 105.

3.4 ADJUSTING AND CLEANING

A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.

B. Remove grout and other bonding material from hollow-metal work immediately after installation.

C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.

D. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.

END OF SECTION 081113

SECTION 081416 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

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

B. Related Sections:

1. Section 088000 "Glazing" for glass view panels in flush wood doors.
2. Section Section 099123 "Interior Painting".

1.3 ACTION SUBMITTALS

A. Product Data: For each type of door indicated. Include details of core and edge construction, louvers, and trim for openings. Include factory-finishing specifications.

B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.
3. Indicate requirements for veneer matching.
4. Indicate doors to be factory finished and finish requirements.
5. Indicate fire-protection ratings for fire-rated doors.

C. Samples for Initial Selection: For factory-finished doors.

1.4 INFORMATIONAL SUBMITTALS

A. Warranty: Sample of special warranty.

1.5 QUALITY ASSURANCE

A. Source Limitations: Obtain flush wood doors and wood paneling from single manufacturer.

B. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A, "Architectural Wood Flush Doors."

C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 .

1. Oversize Fire-Rated Door Assemblies: For units exceeding sizes of tested assemblies, provide certification by a qualified testing agency that doors comply with standard construction requirements for tested and labeled fire-rated door assemblies except for size.
2. Temperature-Rise Limit: At vertical exit enclosures and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.

1.6 DELIVERY, STORAGE, AND HANDLING

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

B. Package doors individually in cardboard cartons and wrap bundles of doors in plastic sheeting.

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

1.7 PROJECT CONDITIONS

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

B. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 43 and 70 percent during the remainder of the construction period.

1.8 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

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

a. Warping (bow, cup, or twist) more than 1/4 inch (6.4 mm) in a 42-by-84-inch (1067-by-2134-mm) section.

b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch (0.25 mm in a 76.2-mm) span.

2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
3. Warranty Period for Solid-Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Algoma Hardwoods, Inc.
2. Eggers Industries.
3. Graham; an Assa Abloy Group company.
4. Mohawk Flush Doors, Inc.; a Masonite company.
5. Lambton Wood Doors.

2.2 DOOR CONSTRUCTION, GENERAL

A. WDMA I.S.1-A Performance Grade: Extra Heavy Duty.

B. WDMA I.S.1-A Performance Grade:

1. Extra Heavy Duty: Classrooms, public toilets, janitor's closets, assembly spaces.

C. Particleboard-Core Doors:

1. Particleboard: ANSI A208.1, Grade LD-1.
2. Particleboard: Straw-based particleboard complying with ANSI A208.1, Grade LD-2 or M-2, except for density.
3. Blocking: Provide wood blocking in particleboard-core doors as needed to eliminate through-bolting hardware and as follows:

a. 5-inch (125-mm) top-rail blocking, in doors indicated to have closers.
b. 5-inch (125-mm) bottom-rail blocking, in exterior doors and doors indicated to have kick, mop, or armor plates.
c. 5-inch (125-mm) midrail blocking, in doors indicated to have exit devices.

4. Provide doors with either glued-wood-stave or structural-composite-lumber cores instead of particleboard cores for doors indicated to receive exit devices.

D. Fire-Protection-Rated Doors: Provide core specified or mineral core as needed to provide fire-protection rating indicated.

1. Edge Construction: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed edges.

2. Pairs: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Provide stiles with concealed intumescent seals**.** Comply with specified requirements for exposed edges.

E. Mineral-Core Doors:

1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
2. Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated as needed to eliminate through-bolting hardware and as follows:

    a. 5-inch (125-mm) top-rail blocking.
    b. 5-inch (125-mm) bottom-rail blocking, in doors indicated to have protection plates.
    c. 5-inch (125-mm) midrail blocking, in doors indicated to have armor plates.
    d. 5-inch (125-mm) midrail blocking, in doors indicated to have exit devices.

3. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.

2.3 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

A. Interior Solid-Core Doors:

1. Grade: Premium, with Grade AA faces.
2. Species: Red oak.
3. Cut: Rift cut.
4. Match between Veneer Leaves: Book match.
5. Assembly of Veneer Leaves on Door Faces: Running match.
6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
7. Room Match: Match door faces within each separate room or area of building. Corridor-door faces do not need to match where they are separated by 20 feet (6 m) or more.
8. Room Match: Provide door faces of compatible color and grain within each separate room or area of building.
9. Transom Match: End match.
10. Blueprint Match: Where indicated, provide doors with faces produced from same flitches as adjacent wood paneling and arranged to provide blueprint match with wood paneling.
11. Exposed Vertical and Top Edges: Same species as faces.
12. Core: Particleboard or Glued wood stove.
13. Construction: Five plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering. Faces are bonded to core using a hot press.
14. Construction: Five plies, either bonded or non-bonded construction.
15. WDMA I.S.1-A Performance Grade: Extra Heavy Duty.

2.4 LIGHT FRAMES

A. Wood-Veneered Beads for Light Openings in Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire-protection rating indicated. Include concealed metal glazing clips where required for opening size and fire-protection rating indicated.

B. Metal Frames for Light Openings in Fire-Rated Doors: Manufacturer's standard frame formed of 0.048-inch- (1.2-mm-) thick, cold-rolled steel sheet; factory primed for paint finish, with baked-enamel- or powder-coated finish; and approved for use in doors of fire-protection rating indicated.

2.5 FABRICATION

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

1. Comply with requirements in NFPA 80 for fire-rated doors.

B. Transom and Side Panels: Fabricate matching panels with same construction, exposed surfaces, and finish as specified for associated doors. Finish bottom edges of transoms and top edges of rabbeted doors same as door stiles.

1. Fabricate door and transom panels with full-width, solid-lumber, rabbeted, meeting rails. Provide factory-installed spring bolts for concealed attachment into jambs of metal door frames.

C. Openings: Cut and trim openings through doors in factory.

1. Light Openings: Trim openings with moldings of material and profile indicated.
2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Section 088000 "Glazing."
3. Louvers: Factory install louvers in prepared openings.

2.6 FACTORY FINISHING

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

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

B. Finish doors at factory.

C. Finish doors at factory that are indicated to receive transparent finish. Field finish doors indicated to receive opaque finish.

D. Finish doors at factory where indicated in schedules or on Drawings as factory finished.

E. Transparent Finish:

1. Grade: Premium.
2. Finish: WDMA TR-6 catalyzed polyurethane.
3. Staining: As selected by Architect from manufacturer's full range.
4. Effect: Filled finish.
5. Sheen: Satin.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and installed door frames before hanging doors.

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

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

3.2 INSTALLATION

A. Hardware: For installation, see Section 087100 "Door Hardware" and Section 087111 "Door Hardware (Descriptive Specification)."

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

1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.

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

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

3.3 ADJUSTING

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

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

END OF SECTION 081416

SECTION 081613 - FRP DOORS AND PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and General Provisions of contract, including General, Special and Supplementary Conditions and Division 1 Specification sections, apply to work in this section.

1.2 DESCRIPTION OF WORK

A. The extent of each type of door is shown on the drawings and schedules.

B. The following types of doors and architectural panels are required:

1. FRP flush doors.
2. FRP panels.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Division 8, Door Hardware.

B. Division 8, Aluminum Entrances, Aluminum Windows.

C. Division 7, Joint Sealant.

1.4 SYSTEM PERFORMANCE

A. Provide door assemblies and architectural panels that have been designed and fabricated to comply with requirements for system performance characteristics listed below, as demonstrated by testing manufacturer's corresponding standard systems according to test methods designated.

B. Thermal Transmission (exterior doors): "U" value of not more than 0.09 (BTU/Hr. x sf x degrees F.) per AAMA 1503.01.

C. Flame Spread/Smoke Developed: Provide FRP doors and panels with the following ratings in according with ASTM 84-79a:
Flame Spread: Not greater than 170 (Class C).
Smoke Developed: Not greater than 390 (Class C).

D. Class A option for flame spread and smoke developed rating on interior faces of exterior panels and both faces of interior panel as shown. Flame spread no greater than 15,smoke developed no greater than 310 per ASTM E-84.

E. Additional Criteria: Provide FRP doors and panels with the following performance:

ASTM D 256 - nominal value of 20.0
ASTM D 570 - nominal value of .20 to .40%
ASTM D 2583 - nominal value of 50

F. Abrasion Resistance: Face sheet to have no greater than .029 average weight loss percentage after Taber Abrasion Test - 25 cycles at 500 gram weight with H-18 wheel.

G. Stain Resistance: Face sheet to be unaffected after 24 hour exposure to SVS-1 white spray enamel. Must retain DE or .57 or less with MacBeth Colorimeter. Dark Brown (Bronze) FRP to be used as a basis.

H. Chemical Resistance: Face sheet to be unaffected after 4 hour exposure to acetic acid (10% solution), acetone, sodium hypochlorite (5.25% solution) and hydrochloric acid (10% solution). No discoloration or panel damage will be allowed.

I. Air Infiltration: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E283 at pressure differential of 6.24 psf. Door shall not exceed 0.90 cfm per linear foot of perimeter crack.

J. Water Resistance: For a single door 3'-0" x 7'-0", test specimen shall be tested in accordance with ASTM E331 at pressure differential of 7.50 psf. Door shall not have water leakage.

K. Hurricane Test Standards, Single Door with Single-Point Latching:

1. Uniform Static Load, ASTM E330: Plus or minus 75 pounds per square foot.
2. Forced Entry Test, 300 Pound Load Applied, SFBC 3603.2 (b)(5): Passed.
3. Cyclic Load Test, SFBC PA 203:Plus or minus 53 pounds per square foot.
4. Large Missile Impact Test, SFBC PA 201: Passed.

L. Swinging Door Cycle Test, Doors and Frames, ANSI A250.4: Minimum of 12, 000,000 cycles.

M. Salt Spray, Exterior Doors and Frames, ASTM B117: minimum of 500 hours.

N. Impact Strength, FRP Doors and Panels, Nominal Value, ASTM D235: 15.0 foot-pounds per inch of notch.

O. Tensile Strength, FRP Doors and Panels, Nominal Value, ASTM D638: 14,000 psi.

P. Flexural Strength, FRP Doors and Panels, Nominal Value, ASTM D790: 21,000 psi.

Q. Water Absorption, FRP Doors and Panels, Nominal Value, ASTM D570: 0.20 percent after 24 hours.

R. Indentation Hardness, FRP Doors and Panels, Nominal Value, ASTM D2583: 55.

S. Compressive Strength, Foam Core, Nominal Value, ASTM D1621: 84.2 psi.

T. Compressive Modulus, Foam Core, Nominal Value, ASTM D1621: 448 psi.

U. Thermal and Humid Aging, Nominal Value @ 158 Degrees F and 100% Humidity for 14 Days, ASTM D2126: - 4.89 Volume Change.

1.5 QUALITY ASSURANCE

A. Standards: Comply with the requirements and recommendations in applicable specification and standards by AAMA, except to the extent more stringent requirements are indicated.

B. Performance: A minimum ten year record of production of doors and panels and completion of similar projects in type and size.

C. Instruction: The manufacturer or his representative will be available for consultation to all parties engaged in the project including instruction to installation personnel.

D. Field Measurement: Field verify all information prior to fabrication and furnishing of materials. Furnish and install materials omitted due to lack of verification at no additional cost to Owner.

E. Regulation and Codes: Comply with the current edition in force at the project location of all local, state and federal codes and regulations, including the Americans with Disabilities Act of 1992.

1.6 SUBMITTALS

A. Product Data: Submit manufacturer's product data, specifications and instructions for each type of door and panel required in accordance with Section 01600 and the following:

1. Include details of core, stile and rail construction, trim for lites and all other components.
2. Include details of finish hardware mounting.
3. Include samples of each aluminum alloy to be used on this project. Where normal finish color and texture variations are expected, include two or more samples to show the range of such variations.
4. Include one sample of typical fabricated section, showing joints, fastenings, quality of workmanship, hardware and accessory items before fabrication of the work proceeds.

B. Submit shop drawings for the fabrication and installation of the doors and panels, and associated components. Details to be shown full scale. Include glazing details and finish hardware schedule.

1.7 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site in their original, unopened packages with labels intact. Inspect materials for damage and advise manufacturer immediately of any unsatisfactory materials.

B. Package door assemblies in individual corrugated cartons so no portion of the door has contact with the outer shell of the container. Package and ship frames preassembled to the greatest possible extent.

1.8 PROJECT WARRANTY

A. Provide a written warranty signed by manufacturer, installer and contractor, agreeing to replace, at no cost to the Owner, any doors, panels or factory hardware installation which fail in materials or workmanship, within the warranty period. Failure of materials or workmanship includes: excessive deflection, faulty operation of entrances, deterioration of

finish or construction in excess of normal weathering and defects in hardware installation. The minimum time period of warranty is ten (10) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturer: Subject to compliance with requirements, provide products of the following: Exterior Doors and Architectural Panels:

1. Heavy Duty F500-HD wide style FRP door systems, as manufactured by Commercial Door Systems establishes the standard of quality and features required. Subject to compliance with requirements, equal products may be submitted for approval under the substitution requirements in Division 1 of the specification.
2. or Approved Equal by Special-Lite
3. or Approved Equal by Markar Architectural Products, Inc.
4. or Approved Equal by Vale Company of Collingdale, PA.

2.2 MATERIALS AND ACCESSORIES

A. Aluminum Members: Alloy and temper as recommended by manufacturer for strength, corrosion resistance and application of required finish and control of color; ASTM B 221 for extrusions, ASTM B 209 for sheet/plate with aluminum wall thickness of 0.125".

B. Components: Furnish door components from the same manufacturer. “Splitting” of door and frame components is not permitted.

C. Fasteners: Aluminum, non-magnetic stainless steel or other non-corrosive metal fasteners, guaranteed by the manufacturer to be compatible with the doors, frames, stops, panels, hardware, anchors and other items being fastened. For exposed fasteners (if any) provide Phillips head screws with finish matching the item to be fastened.

D. Glazing gaskets: For glazing factory-installed glass, and for gaskets which are factory-installed in “captive” assembly of glazing stops, manufacturer’s standard stripping of molded neoprene, complying with ASTM D 2000 (designation 2BC415 to 3BC620), or molded PVC complying with ASTM C 509 Grade 4.

E. Provide ADAAG Handicapped compliant hardware, including pulls, panic devices and closers as noted in the Door Hardware Section of this specification.

2.3 FABRICATION

A. Sizes and Profiles: The required sizes for door units, and profile requirements are shown on the drawings.

B. Coordination of Fabrication: Field measure before fabrication and show recorded measurements on final shop drawings.

C. Complete the cutting, fitting, forming, drilling and grinding of all metal work prior to assembly. Remove burrs from cut edges, and ease edges and corners to a radius of approximately 1/64".

D. Maintain continuity of line and accurate relation of planes and angles. Secure attachments and support at mechanical joints, with hairline fit at contacting members.

2.4 FIBERGLASS REINFORCED POLYESTER FRP DOORS

A. Materials and Construction.

1. Construct 1 3/4" thickness doors of 6063-T5 aluminum alloy rails and stiles minimum 5 1/2 “depth. Construct with mitered corners and provide joinery of 3/8" diameter full width tie rods through extruded splines top and bottom as standard. .125" tubular shaped stiles and rails reinforced to accept hardware as specified. Provide hex type aircraft nuts for joinery without welds, glues or other methods for securing internal door extrusions. Furnish integral reglets to accept face sheet to permit a flush appearance. Rail caps or other face sheet capture methods are not acceptable.

2. Extrude top and bottom rail legs for interlocking continuous rail rigidity weather bar. Lock face sheet material in place with extruded interlocking edges to be flush with aluminum rails and stiles.

3. Door face-sheeting .120" thickness fiberglass reinforced polyester. Doors with an abuse resistant engineered surface. Color to be selected from manufacturer’s full range of colors. Texture: Pebbled Texture Finish.

4. Core of Door Assembly: Minimum five (5) pounds per cubic foot density poured-in-place polyurethane free of CFC. Minimum "R" value of 11. Meeting stiles on pairs of doors and bottom weather bars with nylon brush weatherstripping.

5. Manufacture doors with cutouts for vision lites, louvers or panels as scheduled. Factory furnish and install all glass, louvers and panels prior to shipment.

6. Pre-machine doors in accordance with templates from the specified hardware manufacturers and approved hardware schedule. Factory install hardware.

2.5 ARCHITECTURAL PANELS

A. FRP Panels

1. Thickness: 1" or thickness shown.
2. FRP face sheets with finish color throughout.
3. Construct insulated panels of two, .120" minimum thickness sheets with poured-in-place polyurethane core of minimum five pounds per cubic foot density with a perimeter of aluminum channel. Form components to function as a single unit, and provide a minimum "U" value of .18 for 1" panels.
4. Class A option for flame spread and smoke developed rating on interior faces of exterior panels and both faces of interior panel as shown. Flame spread no greater than 15, smoke developed no greater than 310 per ASTM E-84.
5. Provide FRP panels with pebbled texture finish and color shall match the FRP doors.

2.6 GLAZING

A. Design system for replacement of glass.

1. Manufacturer's standard flush glazing system, factory finished, of recessed channels and captive glazing gaskets or applied stops as shown.
2. Allow for thermal expansion on exterior units.
3. Glass as shown and factory glazed into doors.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Comply with manufacturer's recommendations and specifications for the installation of the doors and architectural panels. Factory install hardware and glass in doors.

B. Set units plumb, level and true to line, without warp or rack of doors. Anchor securely in place. Separate aluminum and other metal surfaces with bituminous coatings or other means as approved by architect.

C. Set thresholds in a bed of mastic and backseal.

D. Clean surfaces promptly after installation of doors and frames, exercising care to avoid damage to the protective coatings.

E. Ensure that the doors will be without damage or deterioration (other than normal weathering) at the time of acceptance.

F. Provide Owner with all adjustment tools and instruction sheets. Provide a minimum one-year written warranty on all labor related to this section. Any workmanship which is defective or deficient shall be corrected to the Owner's satisfaction and at no additional cost to the Owner.

END OF SECTION 081613

SECTION 087110 - DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following:

1. Commercial door hardware for the following:

    a. Swinging doors.

2. Cylinders for doors specified in other Sections.
3. Electrified door hardware.
4. **NOTE:** The Hardware Schedule includes products from SALTO. The General Contractor shall include the cost of the SALTO products and associated installation by local SALTO representative in the General Contractor bid. The General Contractor shall include the cost of coordination of the SALTO products. The General Contractor shall be required to coordinate these products in the door, frame and hardware submittals.

    a. Local SALTO Representative:

    DELCO Solutions, LLC
    3556 Winding Way
    Newtown Square, PA 19073
    Ph: 610-553-3607
    Website: www.delcosolutions.com

B. Related Sections include the following:

1. Division 8 Section "Steel Doors and Frames"
2. Division 8 Section "Flush Wood Doors"
3. Division 8 Section "Aluminum Entrances and Storefronts"

1.3 SUBMITTALS

A. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Details of electrified door hardware, indicating the following:

1. Wiring Diagrams: Detail wiring for power, signal, and control systems and differentiate between manufacturer-installed and field-installed wiring. Include the following:

    a. System schematic.
    b. Point-to-point wiring diagram.
    c. Riser diagram.
    d. Elevation of each door.

2. Detail interface between electrified door hardware and access fire alarm, control, and security building control system.

C. Samples for Initial Selection: Manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available for each type of door hardware indicated.

1. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.

D. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening.

    a. Organize door hardware sets in same order as in the Door Hardware Schedule at the end of Part 3.

3. Content: Include the following information:

    a. Type, style, function, size, label, hand, and finish of each door hardware item.
    b. Manufacturer of each item.
    c. Fastenings and other pertinent information.
    d. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    e. Explanation of abbreviations, symbols, and codes contained in schedule.
    f. Mounting locations for door hardware.
    g. Door and frame sizes and materials.
    h. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.

        1) Sequence of Operation: Include description of component functions that occur in the following situations: authorized person wants to enter; authorized person wants to exit; unauthorized person wants to enter; unauthorized person wants to exit.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

5. Submittal Sequence: Submit initial draft of final schedule along with essential Product Data to facilitate the fabrication of other work that is critical in the Project construction schedule. Submit the final Door Hardware Schedule after Samples, Product Data, coordination with Shop Drawings of other work, delivery schedules, and similar information has been completed and accepted.

E. Keying Schedule: Prepared by or under the supervision of supplier, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

F. Product Certificates: Signed by manufacturers of electrified door hardware certifying that products furnished comply with requirements.

1. Certify that door hardware approved for use on types and sizes of labeled fire doors complies with listed fire door assemblies.

G. Qualification Data: For firms and persons specified in "Quality Assurance" Article.

1. Include lists of completed projects with project names and addresses of architects and owners, and other specified information.

H. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, indicating current products comply with requirements.

I. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 1.

J. Warranties: Special warranties specified in this Section.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed door hardware 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. Supplier Qualifications: Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural Hardware Consultant, available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.

1. Electrified Door Hardware Supplier Qualifications: An experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance, and who is acceptable to manufacturer of primary materials.

a. Engineering Responsibility: Prepare data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.

2. Scheduling Responsibility: Preparation of door hardware and keying schedules.

C. Architectural Hardware Consultant Qualifications: A person who is currently certified by the Door and Hardware Institute as an Architectural Hardware Consultant and who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.

1. Electrified Door Hardware Qualifications: Experienced in providing consulting services for electrified door hardware installations.

D. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.

1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that are listed to perform electrical modifications, by a testing and inspecting agency acceptable to authorities having jurisdiction, are acceptable.

E. Regulatory Requirements: Comply with provisions of the following:

1. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," ANSI A117.1, FED-STD-795, "Uniform Federal Accessibility Standards**,"** as follows:

a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
b. Door Closers: Comply with the following maximum opening-force requirements indicated:

1) Interior Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
2) Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
3) Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

c. Thresholds: Not more than 1/2 inch (13 mm) high, not more than 3/4 inch (19 mm) high for exterior sliding doors. Bevel raised thresholds with a slope of not more than 1:2.

2. NFPA 101: Comply with the following for means of egress doors:

a. Latches, Locks, and Exit Devices: Not more than 15 lbf (67 N) to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
b. Delayed-Egress Locks: Lock releases within 15 seconds after applying a force not more than 15 lbf (67 N) for not more than 3 seconds.
c. Door Closers: Not more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.
d. Thresholds: Not more than 1/2 inch (13 mm) high.

3. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction.

F. Fire-Rated Door Assemblies: Provide door hardware for assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.

1. Test Pressure: Test at atmospheric pressure.

G. Keying Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings." Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:

1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
2. Preliminary key system schematic diagram.
3. Requirements for key control system.
4. Address for delivery of keys.

H. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

I. All Electric Door Hardware shall be furnished and installed by the General Contractor. **All Electric Door Hardware shall be wired by a certified electrician as a subcontract to the General Contactor**. The General Contractor shall meet with subcontractors and coordinate all work before proceeding.

J. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings." Review methods and procedures related to electrified door hardware including, but not limited to, the following:

1. Inspect and discuss electrical roughing-in and other preparatory work performed by other trades.
2. Review sequence of operation for each type of electrified door hardware.
3. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review required testing, inspecting, and certifying procedures.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item with Door Number related to the final Approved Door Hardware Schedule and include basic installation instructions with each item or package.

C. Deliver keys to manufacturer of key control system, or Owner as Directed.

D. Deliver keys to Owner by registered mail or overnight package service.

1.6 COORDINATION

A. Coordinate layout and installation of recessed pivots and closers with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 3 Section "Cast-in-Place Concrete."

B. Templates: Obtain and distribute to the parties' involved templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

C. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system, security system, and building control system.

1.7 WARRANTY

A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:

1. Structural failures include excessive deflection, cracking, or breakage.
2. Faulty operation of operators and door hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

C. Warranty Period for Locksets: Three, (3) years from date of Substantial Completion, unless otherwise indicated.

D. Warranty Period for Manual Closers: Ten, (10) years from date of Substantial Completion, unless otherwise indicated.

E. Warranty Period for Exit Devices: Three, (3) years from date of Substantial Completion, unless otherwise indicated.

1.8 MAINTENANCE SERVICE

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

B. Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door hardware operation. Provide parts and supplies as used in the manufacture and installation of original products.

C. Engage a factory authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in this Section**,** door hardware sets indicated in door and frame schedule, and the Door Hardware Schedule at the end of Part 3.

1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated and named manufacturer's products**.** Retain subparagraph below for electrified door hardware.
2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Schedule at the end of Part 3. Products are identified by using door hardware designations, as follows:

1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.

2.2 HINGES

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

1. Butt Hinges:
   a. Best Hinge Company, Inc.
   b. Hager Hinge Company
   c. Bommer Hinge Company

2. Continuous Hinges:

   a. Architectural Builders Hardware Mfg., Inc.
   b. National Guard Products, Inc.
   c. Best Hinge Company, Inc.

B. Standards: Comply with the following:
1. Hinges ANSI/BHMA Standard A156.1 Grade 1
2. Continuous Hinges ANSI/BHMA Standard A156.26 Grade 1

C. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.

D. Concealed bearings are made from engineered polymer material with PTFE and Aramid fiber; bearing is maintenance free, no oil, no grease.

E. Butt hinges are equipped with easily seated, non-rising pin. Hole in bottom of pin enables quick pin removal for ease of installation.

F. Continuous hinge material to be 14-gauge, 304 stainless steel

G. Continuous hinge steel pin to be .25 diameter, 304 stainless steel

H. Continuous hinge exterior barrel diameter .438 (7/16)

I. Continuous hinge knuckle to be 2", including split nylon bearing at each separation for a quiet, smooth, self-lubricating operation

J. All hinges to carry Warnock Hersey Int. or UL for fire rated doors and frames up to 3 hours

K. Continuous hinges to have Symmetrically templated hole pattern

L. Continuous hinge to have a 10-year Warranty

M. Hinge Weight: Unless otherwise indicated, provide the following:
1. Supports weights up to 600lbs.

N. Hinge Base Metal: Unless otherwise indicated, provide the following:

1. Exterior Continuous Hinges: Stainless steel, with stainless-steel pin,
2. Interior Continuous Hinges: Stainless steel, with stainless-steel pin.
3. Continuous Hinges for Fire-Rated Assemblies: Stainless steel, with stainless-steel pin.
4. Exterior Butt Hinges: Stainless Steel or Brass or Bronze
5. Interior Butt Hinges: Steel or Brass or Bronze

O. Hinge Options: Comply with the following were indicated in the Door Hardware Schedule or on Drawings:

1. Hospital Tips: Slope ends of hinge barrel.
2. Maximum Security Pin: Fix pin in hinge barrel after it is inserted.
3. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the following applications:

    a. Outswinging exterior doors.
    b. Outswinging corridor doors with locks.

P. Continuous-Geared Aluminum Hinges: Minimum 0.120-inch- (3.0-mm-) thick, hinge leaves with minimum overall width of 4 inches (100 mm); fabricated to full height of door and frame. Finish components after milling and drilling are complete. Fabricate hinges to template screw locations.

Q. All geared hinges to be heavy-gauge aluminum alloy with solid support blocks of self-lubricating DELRIN.

R. All geared hinges to meet Dynamic and static load test for compliance with ANSI A156.1, (BHMA) for 350,000 cycles at 15 cycles per minute.

S. Fasteners: Comply with the following:

1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
2. Wood Screws: For wood doors and frames.
3. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.
4. Screws: Phillips flat-head screws; machine screws drilled and tapped holes for metal doors, wood screws for wood doors and frames. Finish screw heads to match surface of hinges.

2.3 LOCKS AND LATCHES

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

1. Mechanical Locks and Latches:
   a. Best Access Systems, Inc., District Standard, No Substitution
   b. Salto CR Locksets, Inc., District Standard, No Substitution

B. Standards: Comply with the following:

1. Bored Locks and Latches: BHMA A156.2.
2. Mortise Locks and Latches: BHMA A156.13.

C. Bored Locks: ANSI A156.2, BHMA Series 4000, Grade 1, and is UL Listed.

D. Mortise Locks: Stamped steel case with steel or brass parts; ANSI A156.13, Series 1000, BHMA Grade 1 Operational and Grade 2 Security and be UL Listed.

E. Certified Products: Provide door hardware listed in the following BHMA directories:

1. Mechanical Locks and Latches: BHMA's "Directory of Certified Locks & Latches."
2. Electromagnetic Locks: BHMA's "Directory of Certified Electromagnetic & Delayed Egress Locks."

F. Lock Trim: Comply with the following:

1. Lever: Mortise Locks & Latches, Forged or Cast brass, bronze or stainless-steel construction

2. Lever: Cylindrical Locks & Latches, Zinc material with a minimum wall thickness of .060
3. Dummy Trim: Match lever lock trim and escutcheons.

G. Lock Functions: Function numbers and descriptions indicated in the Door Hardware Schedule comply with the following:

1. Bored Locks: BHMA A156.2.
2. Mortise Locks: BHMA A156.13.

H. Lock Throw: Comply with testing requirements for length of bolts to comply with labeled fire door requirements, and as follows:

1. Bored Locks: Minimum 9/16-inch latch bolt throw.
2. Mortise Locks: Minimum 3/4-inch latch bolt throw.
3. Deadbolts: Minimum 1-inch bolt throw.

I. Backset: 2-3/4 inches (70 mm), unless otherwise indicated.

J. Mortise Locks & Latches shall have an anti-friction, 3/4-inch throw latch bolt with anti-friction piece made of self-lubricated stainless steel. Latch bolt with plastic insert and three-piece latch bolt are unacceptable on this project.

K. Mortise Locks & Latches shall have levers to be operated with a roller bearing spindle hub mechanism.

L. Cylindrical Locks & Latches to have solid shank with no opening for access to keyed lever keeper.

2.4 EXIT DEVICES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Precision Hardware, Inc., 2000 Series
   2. Dormakaba 9000 Series

B. Standard: BHMA A156.3.

   1. BHMA Grade: Grade 1

C. Certified Products: Provide exit devices listed in BHMA's "Directory of Certified Exit Devices."

D. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.

E. Fire Exit Devices: Complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.

F. Warranty: Exit device to have published Five (5) Year Warranty.

G. Exit device shall be “touch pad” type with a touch pad that shall extend a minimum of one half (1/2) of the door width.

H. Exit device shall have a one-quarter (1/4) gap between the face of the door and the touch bar channel eliminating the need for shims or cutting away the glass molding.

I. Exit device lock stile chassis shall be investment cast steel. Stamped steel units will not be accepted. All device latch bolts shall be stainless steel and shall be deadlocking type.

J. Exit device strikes shall be adjustable type investment cast stainless steel.

K. Exit device should include sound reduction dampening for both depression and extension of the touch pad.

L. Exit device end cap shall be all metal and secured with a bracket that interlocks both at the touch bar channel base and hinge side filler to prevent end cap “peel-back”.

M. All exposed surfaces of the exit device housing shall be no less than 14-gauge brass or bronze; or no less than 16-gauge stainless steel. Aluminum housing type exit devices are not acceptable.

N. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.

   1. Operation: Rigid

O. Outside Trim: Lever, Lever with cylinder, Pull, pull with cylinder**,** material and finish to match locksets, unless otherwise indicated.

   1. Match design for locksets and latchsets, unless otherwise indicated.

2.5 CYLINDERS AND KEYING

A. The local Best Access System service center shall furnish new master keys and cores directly to owner. All costs for cores, keys and master keying for this project are part of this bid package. All costs to install cores after construction if required are part of this bid package with hardware supplier installing cores on site. All costs for on site owner training (minimum 8-hours) if required by owner is included in this bid package.

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Cylinders:
      a. Best Access Systems, Inc., District Standard, No Substitution
      b. All cylinders shall be Best Peaks, 7-pin interchangeable cores.

C. Standards: Comply with the following:

   1. Cylinders: BHMA A156.5.

D. Cylinder Grade: BHMA Grade 1**,** Cylinders: Manufacturer's standard tumbler type, constructed from brass or bronze, stainless steel, or nickel silver, and complying with the following:

   1. Number of Pins: Seven.
   2. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
   3. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   4. Bored-Lock Type: Cylinders with tailpieces to suit locks.

E. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
   1. Removable Cores: Core insert, removable by use of a special key, and for use with only the core manufacturer's locksets.

F. Construction Keying: Comply with the following:

   1. Construction Cores: Provide Brass construction cores in all locksets and cylinders that are replaceable by permanent cores.

      a. Replace Brass construction cores with permanent cores, as indicated in keying schedule

G. Keying System: Unless otherwise indicated, provide a factory-registered keying system complying with the following requirements:
   1. Existing System: Master key or grand master key locks to Owner's existing system.

H. Keys: Provide nickel-silver keys complying with the following:

   1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:

      a. Notation: **"DO NOT DUPLICATE."**

2. Quantity: In addition to one extra blank key for each lock, provide the following:

    a. Cylinder Change Keys: Three.
    b. Master Keys: Five.
    c. Grand Master Keys: Five.
    d. Great-Grand Master Keys: Five.
    e. Control Keys: Five
    f. Construction Master Keys: Ten
    g. Construction Core Control Keys: Five

2.6 STRIKES

A. Standards: Comply with the following:

1. Strikes for Bored Locks and Latches: BHMA A156.2.
2. Strikes for Mortise Locks and Latches: BHMA A156.13.
3. Strikes for Auxiliary Deadlocks: BHMA A156.5.
4. Dustproof Strikes: BHMA A156.16.

B. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latch bolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.

C. Dustproof Strikes: BHMA Grade 1

2.7 ACCESSORIES FOR PAIRS OF DOORS

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

1. Removable Mullions:
    a. Precision Hardware, Inc.
    b. Dormakaba Manufacturing, Inc.

2. Astragals:
    a. Stanley Commercial Hardware
    b. Architectural Builders Hardware, Inc.

B. Standards: Comply with the following:

1. Coordinators: BHMA A156.3.
2. Removable Mullions: BHMA A156.3.

C. Fire-Exit Removable Mullions: Provide removable mullions for use with fire exit devices complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252. Mullions shall be used only with exit devices for which they have been tested.

2.8 CLOSERS

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

1. Surface-Mounted Closers:
   a. Dormakaba Door Closers 8900 Series
   b. Best Door Closers, Inc. HD8000 Series
   c. LCN Door Closers, Inc., 4000 series

B. Standards: Comply with the following:

1. Closers: BHMA A156.4.

C. Surface Closers: BHMA Grade 1

D. Certified Products: Provide door closers listed in BHMA's "Directory of Certified Door Closers."

E. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.9 PROTECTIVE TRIM UNITS

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

1. Metal Protective Trim Units:
   a. Architectural Builders Hardware, Inc.
   b. Burns Manufacturing Company, Inc.

B. Standard: Comply with BHMA A156.6.

C. Materials: Fabricate protection plates from the following:
1. Stainless Steel: 0.050 inch (1.3 mm) thick; beveled 4 sides.

D. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine or self-tapping screws.

E. Furnish protection plates sized 2” less than door width on push side and 1” less than door width on pull side, by height specified in Door Hardware Schedule.

2.10 STOPS AND HOLDERS

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

1. Architectural Builders Hardware Mfg., Inc.
2. Rixson, Inc.

B. Standards: Comply with the following:

1. Stops and Bumpers: BHMA A156.16.
2. Electromagnetic Door Holders: BHMA A156.15.
3. Combination Overhead Holders and Stops: BHMA A156.8.
4. Door Silencers: BHMA A156.16.

C. Stops and Bumpers: BHMA Grade 1

D. Combination Overhead Stops and Holders: BHMA Grade 1

E. Electromagnetic Door Holders for Labeled Fire Door Assemblies: Coordinate with fire detectors and interface with fire alarm system.

F. Silencers for Metal Door Frames: BHMA Grade 1; neoprene or rubber, minimum diameter 1/2 inch (13 mm); fabricated for drilled-in application to frame.

2.11 DOOR GASKETING

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

1. Door Gasketing:
   a. National Guard Products., Inc.
   b. Reese Manufacturing, Inc.

2. Door Bottoms:
   a. National Guard Products., Inc.
   b. Reese Manufacturing, Inc.

B. Standard: Comply with BHMA A156.22.

C. General: Provide continuous weather-strip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated or scheduled. Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
2. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
3. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

D. Air Leakage: Not to exceed 0.50 cfm per foot (0.000774 cu. m/s per m) of crack length for gasketing other than for smoke control, as tested according to ASTM E 283.

E. Smoke-Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke-control ratings indicated, based on testing according to UL 1784.

1. Provide smoke-labeled gasketing on 20-minute-rated doors and on smoke-labeled doors.

F. Fire-Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL 10B or NFPA 252.

G. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated, based on testing according to ASTM E 1408.

H. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

I. Gasketing Materials: Comply with ASTM D 2000 and AAMA 701/702.

2.12 THRESHOLDS

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

a. National Guard Products, Inc.
b. Reese Manufacturing, Inc.

B. Standard: Comply with BHMA A156.21.

2.13 FABRICATION

A. Manufacturer's Nameplate: Do not provide manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise approved by Architect.

1. Manufacturer's identification will be permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18 for finishes. Do not furnish manufacturer's standard materials or forming methods if different from specified standard.

C. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to commercially recognized industry standards for application intended. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.

2. Steel Machine or Wood Screws: For the following fire-rated applications:

   a. Mortise hinges to doors.
   b. Strike plates to frames.
   c. Closers to doors and frames.

3. Steel Through Bolts: For the following fire-rated applications, unless door blocking is provided:

   a. Surface hinges to doors.
   b. Closers to doors and frames.
   c. Surface-mounted exit devices.

4. Spacers or Sex Bolts: For through bolting of hollow metal doors.
5. Fasteners for Wood Doors: Comply with requirements of DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.14 FINISHES

A. Standard: Comply with BHMA A156.18.

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.

D. BHMA Designations: Comply with base material and finish requirements indicated by the following:

1. BHMA 600: Primed for painting, over steel base metal.
2. BHMA 626: Satin chromium plated over nickel, over brass or bronze base metal.
3. BHMA 628: Satin aluminum, clear anodized, over aluminum base metal.
4. BHMA 630: Satin stainless steel, over stainless steel base metal.
5. BHMA 652: Satin chromium plated over nickel, over steel base metal.
6. BHMA 689: Aluminum painted, over any base metal.
7. BMHA 710: Steralloy / Stainless Steel

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.

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

3.2 PREPARATION

A. Steel Doors and Frames: Comply with DHI A115 series.

1. Surface-Applied Door Hardware: Drill and tap doors and frames according to SDI 107.

B. Wood Doors: Comply with DHI A115-W series.

3.3 INSTALLATION

A. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

C. Key Control System: Place keys on markers and hooks in key control system cabinet, as determined by final keying schedule. Supply key cabinet with 25% expansion. Factory install keys in cabinet or in field with owner’s representative. Key cabinet to be supplied with a “Complete System” equal to the Telkee System.

D. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings, in equipment room. Verify location with Architect.

1. Configuration: Provide one power supply for each door opening.
2. Configuration: Provide the least number of power supplies required to adequately serve doors with electrified door hardware.

E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

3.4 FIELD QUALITY CONTROL

A. Independent Architectural Hardware Consultant: Owner or Architect will engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.

1. Independent Architectural Hardware Consultant will inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: Adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.

B. Six-Month Adjustment: Approximately six months after date of Substantial Completion, Installer shall perform the following:

1. Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.
2. Consult with and instruct Owner's personnel on recommended maintenance procedures.
3. Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.

3.6 CLEANING AND PROTECTION

A. Clean adjacent surfaces soiled by door hardware installation.

B. Clean operating items as necessary to restore proper function and finish.

C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.7 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes.

3.8 HARDWARE SCHEDULE

Hardware Schedule
RUSSELL ELEMENTARY SCHOOL

Hardware Set #: 0001 - SGL DRS WD & EXISTING WD-FR
1/101 1/102 1/103 1/203 1/204 1/205 1/206 1/207 1/208
1/210 1/213 1/215 1/216 1/217 1/218

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0002 - SGL DRS WD & EXISTING HM-FR LABEL
1/104 1/C203

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0003 - SGL DRS WD & EXISTING HM-FR LABEL
1/105 1/107* 1/109 1/111* 1/112* 1/113* 1/214 1/219* 1/220*
1/221 1/223* 1/225 1/227* 1/228 1/229

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0004 - SGL DRS WD & EXISTING WD-FR
1/106 1/108 1/110 1/209 1/A101 1/B204 1/B205 1/C101 1/C102

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0005 - SGL DRS WD & WD-FR
1/B102

Opening to Have:

Qty	Description	Finish	Mfg
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO

Hardware Set #: 0006 - SGL DRS WD & HMF LABEL
1/B103 1/B104

Opening to Have:

Qty	Description	Finish	Mfg
3	HINGE FBB179 4.5 x 4.5	652	BEST
1	DEADBOLT (CLASSROOM) 48H7-R x ABC x PEAKS	626	BEST
1	PULL PLATE AB125 x AB70B 3-1/2" x 15" x CFC	630	ABH
1	PUSH PLATE AB70C 4" x 16" .050 x B4E x CYLT	630	ABH
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO

Hardware Set #: 0007 - SGL DRS WD & EXISTING WD-FR
1/B105

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0008 - SGL DRS HMD & EXISTING HM-FR LABEL
1/D101

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP	652	BEST
1	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	RIM EXIT DEVICE FL-2103	630	PRECISION
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	TEAR DROP SEAL 5050B x HEAD & JAMBS	BLK	NGP
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0009 - PRS DRS HMD & EXISTING HM-FR LABEL
2/D101

Opening to Have:

Qty	Description	Finish	Mfg
6	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
6	HINGE FBB179 4.5 x 4.5 x NRP	652	BEST
1	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	SVR EXIT DEVICE FL-2201 x EXIT ONLY x LBR	630	PRECISION
1	SVR EXIT DEVICE FL-2203 x LBR	630	PRECISION
2	REINSTALL EXISTING CLOSER ON DOOR		
2	KICK PLATE 10" x 1" LDW .050 x B4E x CTSK	630	ABH
2	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	TEAR DROP SEAL 5050B x HEAD & JAMBS	BLK	NGP
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0010 - SGL DRS WD & EXISTING WD-FR
1/D102

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	PRIVACY LOCKSET 45H0-L-3H x VIB	630	BEST
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0011 - SGL DRS WD & EXISTING HM-FR LABEL
1/202

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP	652	BEST
1	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	RIM EXIT DEVICE 2103CD	630	PRECISION
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0012 - PRS DRS WD & EXISTING WD-FR
2/B202 2/C202

Opening to Have:

Qty	Description	Finish	Mfg
6	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
6	HINGE FBB179 4.5 x 4.5	652	BEST
2	PULL PLATE AB125 x AB70B 3-1/2" x 15"	630	ABH
2	PUSH PLATE AB70C 4" x 16" .050 x B4E	630	ABH
2	DOOR CLOSER 8916FC x SDS x LSN	689	DORMAKABA
2	KICK PLATE 10" x 1" LDW .050 x B4E x CTSK	630	ABH
2	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
2	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0013 - SGL DRS WD & EXISTING HM-FR
1/229.2

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0014 - SGL DRS WD & EXISTING HM-FR LABEL
1/230

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
1	TEAR DROP SEAL 5050B x HEAD & JAMBS	BLK	NGP
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0015 - SGL DRS WD & EXISTING HM-FR LABEL
1/232

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0016 - SGL DRS WD & HMF LABEL
1/A203

Opening to Have:

Qty	Description	Finish	Mfg
3	HINGE FBB179 4.5 x 4.5	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO

Hardware Set #: 0017 - SGL DRS WD & EXISTING WD-FR
1/211

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0018 - SGL DRS WD & EXISTING HM-FR LABEL
1/212

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0019 - PRS DRS WD & EXISTING HM-FR
1/B203 1/B206

Opening to Have:

Qty	Description	Finish	Mfg
6	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
6	HINGE FBB179 4.5 x 4.5	652	BEST
2	PULL PLATE AB125 x AB70B 3-1/2" x 15"	630	ABH
2	PUSH PLATE AB70C 4" x 16" .050 x B4E	630	ABH
2	REINSTALL EXISTING CLOSER ON DOOR		
2	KICK PLATE 10" x 1" LDW .050 x B4E x CTSK	630	ABH
2	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
2	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0020 - SGL DRS WD & EXISTING WD-FR
1/D212

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP	652	BEST
1	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	RIM EXIT DEVICE 2103CD	630	PRECISION
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0021 - SGL DRS WD & EXISTING WD-FR (ALTERNATE No.1)
1/101.1 1/101.2 1/102.1 1/102.2 1/103.1 1/103.2 1/106.1 1/107.1
1/108.1 1/109.1 1/110.1 1/110.2 1/202.1 1/202.2 1/203.1 1/203.2
1/204.1 1/204.2 1/205.1 1/205.2 1/206.1 1/206.2 1/207.1 1/207.2
1/208.1 1/208.2 1/209.1 1/209.2 1/210.1 1/210.2 1/213.1 1/213.2
1/215.1 1/215.2 1/216.1 1/216.2 1/217.1 1/217.2 1/218.1 1/218.2

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	O/H SURFACE STOP 4414 x HO (36" TO 48" DR)	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0022 - SGL DRS WD & EXISTING HM-FR (ALTERNATE No.1)
1/111.1 1/111.2 1/111.3 1/112.1 1/112.2 1/112.3 1/113.1 1/113.2
1/219.1 1/219.2 1/220.1 1/220.2 1/223.1 1/223.2 1/227.1 1/227.2
1/229.1

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	O/H SURFACE STOP 4414 x HO (36" TO 48" DR)	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0023 - SGL DRS WD & EXISTING WD-FR (ALTERNATE No.1)
1/D208

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0024 - SGL DRS WD & EXISTING HM-FR (ALTERNATE No.1)
1/C204 2/C204

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	O/H SURFACE STOP 4414 x HO (36" TO 48" DR)	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0025 - SGL DRS WD & EXISTING HM-FR (ALTERNATE No.1)
1/C205

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	WALL STOP AB409	630	ABH
3	SILENCERS 1229A	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0026 - SGL DRS EXISTING WD & EXISTING HM-FR (ALTERNATE No.1)
1/113.3 1/113.4 1/113.5 1/201 1/201.1 1/201.2 1/D104 1/D205

Opening to Have:

Qty	Description	Finish	Mfg
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	BALANCE OF EXISTING HARDWARE TO REMAIN		
1	MODIFY / REPAIR FRAME & DOOR FOR HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0027 - SGL DRS FRP DR & EXISTING ALUM-FR (ALTERNATE No.2)
3/D101

Opening to Have:

Qty	Description	Finish	Mfg
1	CONTINUOUS HINGE A110HDC x SC x FULL HEIGHT	628	ABH
1	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	RIM EXIT DEVICE 2103	630	PRECISION
1	DOOR CLOSER 8916FC x SDS x LSN	689	DORMAKABA
1	KICK PLATE 16" x 2" LDW .050 x B4E x CTSK	630	ABH
1	RAIN DRIP 16A x FULL WIDTH + 4"	628	NGP
1	DOOR SWEEP 200NA x FULL WIDTH	628	NGP
1	THRESHOLD 896V x SIA x 1/4-20-2" COMBO	628	NGP

Hardware Set #: 0028 - PRS DRS ALUM DR & EXISTING HM-FR (ALTERNATE No.2)
1/A200 1/D202

Opening to Have:

Qty	Description	Finish	Mfg
2	CONTINUOUS HINGE A110HDC x SC x FULL HEIGHT	628	ABH
2	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	RIM EXIT DEVICE 2101LD x EXIT ONLY	630	PRECISION
1	RIM EXIT DEVICE 2103LD	630	PRECISION
1	REMOVABLE MULLION KR822 x ST989 x MCS822	689	PRECISION
2	DOOR CLOSER 8916FC x SDS x LSN	689	DORMAKABA
2	DROP PLATE DP89 (TOP RAIL FACE < 5-3/4")	689	DORMAKABA
1	TEAR DROP SEAL 5050B x HEAD & JAMBS	BLK	NGP
1	MULLION SEAL 5100N x MULLION x FULL HEIGHT	BLK	NGP
1	RAIN DRIP 16A x FULL WIDTH + 4"	628	NGP
2	DOOR SWEEP 200NA x FULL WIDTH	628	NGP
1	THRESHOLD 896V x SIA x 1/4-20-2" COMBO	628	NGP
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0029 - PRS DRS ALUM DR & EXISTING ALUM-FR (ALTERNATE No.2)
1/C202 3/222 6/222A

Opening to Have:

Qty	Description	Finish	Mfg
2	CONTINUOUS HINGE A110HDC x SC x FULL HEIGHT	628	ABH
2	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	RIM EXIT DEVICE 2101LD x EXIT ONLY	630	PRECISION
1	RIM EXIT DEVICE 2103LD	630	PRECISION
1	REMOVABLE MULLION KR822 x ST989 x MCS822	689	PRECISION
2	DOOR CLOSER 8916FC x SDS x LSN	689	DORMAKABA
2	DROP PLATE DP89 (TOP RAIL FACE < 5-3/4")	689	DORMAKABA
2	BLADE STOP SPACER BSHD	689	DORMAKABA
2	ANGLE BRACKET SHOE NFHD	689	DORMAKABA
1	MULLION SEAL 5100N x MULLION x FULL HEIGHT	BLK	NGP
1	RAIN DRIP 16A x FULL WIDTH + 4"	628	NGP
2	DOOR SWEEP 200NA x FULL WIDTH	628	NGP
1	THRESHOLD 896V x SIA x 1/4-20-2" COMBO	628	NGP

Hardware Set #: 0030 - SGL DRS ALUM DR & EXISTING ALUM-FR (ALTERNATE No.2)
2/D208

Opening to Have:

Qty	Description	Finish	Mfg
1	CONTINUOUS HINGE A110HDC x SC x FULL HEIGHT	628	ABH
1	RIM CYLINDER (IC) 1E72 x RP x ABC x PEAKS	626	BEST
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	RIM EXIT DEVICE 2103	630	PRECISION
1	DOOR CLOSER 8916FC x SDS x LSN	689	DORMAKABA
1	DROP PLATE DP89 (TOP RAIL FACE < 5-3/4")	689	DORMAKABA
1	BLADE STOP SPACER BSHD	689	DORMAKABA
1	ANGLE BRACKET SHOE NFHD	689	DORMAKABA
1	RAIN DRIP 16A x FULL WIDTH + 4"	628	NGP
1	DOOR SWEEP 200NA x FULL WIDTH	628	NGP
1	THRESHOLD 896V x SIA x 1/4-20-2" COMBO	628	NGP

Hardware Set #: 0031 - SGL DRS WD & WD-FR (ALTERNATE No.3)
1/CS-2 2/CS-2

Opening to Have:

Qty	Description	Finish	Mfg
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO

Hardware Set #: 0032 - SGL DRS WD & EXISTING HM-FR LABEL (ALTERNATE No.3)
1/CS-1 2/CS-1

Opening to Have:

Qty	Description	Finish	Mfg
3	NEW HINGES TO MATCH EXISTING FRAME HINGE CUTOUTS (VIF)		
3	HINGE FBB179 4.5 x 4.5 x NRP x AWS	652	BEST
1	MORTISE CYLINDER (IC) 1E74 x RP3 x ABC x PEAKS	626	BEST
1	SALTO CARD READER LOCKSET A60-XS4 x WIDE BODY VERSION	626	SALTO
1	REINSTALL EXISTING CLOSER ON DOOR		
1	KICK PLATE 10" x 2" LDW .050 x B4E x CTSK	630	ABH
1	MOP PLATE 6" x 1" LDW .050 x B4E x CTSK	630	ABH
3	SILENCERS 1229B	GRAY	TRIMCO
1	MODIFY / REPAIR FRAME FOR NEW HARDWARE AS REQUIRED (VIF)		

Hardware Set #: 0033 - PRS DRS EXISTING HMD & EXISTING WD-FR (UNEQUAL PAIR)
1/222 2/222 4/222A 5/222A

Opening to Have:

Qty	Description	Finish	Mfg
1	SALTO PANIC DEVICE TRIM AH660A00IMHD (SVR,CVR,RIM)	626	SALTO
1	BALANCE OF EXISTING HARDWARE TO REMAIN		

END OF SECTION 087110

SECTION 088000 - GLAZING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:
   1. Doors.

1.3 DEFINITIONS

A. Glass Manufacturers: Firms that produce primary glass, fabricated glass, or both, as defined in referenced glazing publications.

B. Glass Thicknesses: Indicated by thickness designations in millimeters according to ASTM C 1036.

C. Interspace: Space between lites of an insulating-glass unit.

1.4 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. Delegated Design: Design glass, including comprehensive engineering analysis according to ASTM E 1300 ICC's 2018 International Building Code by a qualified professional engineer, using the following design criteria:
   1. 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.
      b. Basic Wind Speed: 100 mph (44 m/s).
      c. Importance Factor: 1.15
      d. Exposure Category:

   2. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical, design glass to resist design wind pressure based on glass type factors for short-duration load.

3. Maximum Lateral Deflection: For glass supported on all four edges, limit center-of-glass deflection at design wind pressure to not more than 1/50 times the short-side length or 1 inch (25 mm), whichever is less.

4. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on glass framing members and glazing components.

1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.

1.5 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each glass and glazing product, from manufacturer.

B. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.

1.6 QUALITY ASSURANCE

A. Source Limitations for Glass: Obtain tinted float glass coated float glass laminated glass and insulating glass from single source from single manufacturer for each glass type.

B. Source Limitations for Glazing Accessories: Obtain from single source from single manufacturer for each product and installation method.

C. Safety Glazing Labeling: Where safety glazing labeling is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

D. Fire-Protection-Rated Glazing Labeling: Permanently mark fire-protection-rated glazing with certification label of a testing agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, test standard, whether glazing is for use in fire doors or other openings, whether or not glazing passes hose-stream test, whether or not glazing has a temperature rise rating of 450 deg F (250 deg C), and the fire-resistance rating in minutes.

1.7 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 recommendations for venting and sealing units to avoid hermetic seal ruptures due to altitude change.

1.8 PROJECT 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 below 40 deg F (4.4 deg C).

1.9 WARRANTY

A. Manufacturer’s Special Warranty in Insulating Glass: Manufacturer’s standard form in which 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 it’s not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer’s written instructions.

1. Warranty Period: 10 years from date of Substantial Completion, warranty to include coverage for sealed glass units from seal failure, interpane dusting of misting, and replacement of same.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS, GENERAL

A. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.

1. Minimum Glass Thickness for Exterior Lites: Not less than ¼ inch.

B. Strength: Where float glass is indicated, provide annealed float glass, Kind HS heat-treated float glass, or Kind FT heat-treated float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened glass is indicated, provide Kind HS heat-treated float glass or Kind FT heat-treated float glass as needed to comply with "Performance Requirements" Article. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.

C. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:

1. For monolithic-glass lites, properties are based on units with lites ¼ inch thick or as indicated
2. For insulating-glass units, properties are based on units of thickness indicated for overall unit and for each lite.
3. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F (W/sq. m x K).
4. Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.

5. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

2.2 GLASS PRODUCTS

A. Float Glass: ASTM C 1036, Type I, Quality-Q3, Class I (clear) unless otherwise indicated.

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

a. AFG Industries, Inc.; Krystal Klear.
b. Guardian Industries Corp.; Ultrawhite.
c. Pilkington North America; Optiwhite.
d. PPG Industries, Inc.; Starphire.

B. Heat-Treated Float Glass: ASTM C 1048; Type I; Quality-Q3; Class I (clear) unless otherwise indicated; of kind and condition indicated.

1. Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed unless otherwise indicated.
2. For uncoated glass, comply with requirements for Condition A.
3. For coated vision glass, comply with requirements for Condition C (other coated glass).

C. Uncoated Tinted Float Glass: Class 2, complying with other requirements specified.

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

2. Tint Color: Gray.
3. Visible Light Transmittance: Percent minimum.

2.3 INSULATING GLASS

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

1. AGC Industries, Inc
2. Guardian Industries Corp.
3. PDG Indusstries.
4. Viracon.

B. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190, and complying with other requirements specified.

1. Sealing System: Dual seal, with manufacturer's standard primary and secondary.
2. Spacer: Manufacturer's standard spacer material and construction.
3. Desiccant: Molecular sieve or silica gel, or blend of both.

C. Glass: Comply with applicable requirements in "Glass Products" Article and as indicated by designations in "Insulating-Glass Types" Article.

2.4 FIRE-PROTECTION-RATED GLAZING

A. Fire-Protection-Rated Glazing, General: Listed and labeled by a testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 252 for door assemblies and NFPA 257 for window assemblies.

2.5 GLAZING GASKETS

A. Dense Compression Gaskets: Molded or extruded gaskets of profile and hardness required to maintain watertight seal, made from one of the following:

1. Neoprene complying with ASTM C 864.
2. EPDM complying with ASTM C 864.
3. Silicone complying with ASTM C 1115.
4. Thermoplastic polyolefin rubber complying with ASTM C 1115.

B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned neoprene, EPDM silicone or thermoplastic polyolefin rubber gaskets complying with ASTM C 509, Type II, black; of profile and hardness required to maintain watertight seal.

1. Application: Use where soft compression gaskets will be compressed by inserting dense compression gaskets on opposite side of glazing or pressure applied by means of pressure-glazing stops on opposite side of glazing.

C. Lock-Strip Gaskets: Neoprene extrusions in size and shape indicated, fabricated into frames with molded corner units and zipper lock-strips, complying with ASTM C 542, black.

2.6 GLAZING SEALANTS

A. General:

1. Compatibility: Provide glazing sealants that are compatible with one another and with other materials they will 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, provide one of the following:

a. Dow Corning Corporation; 795.
b. Pecora Corporation; 894NST.
c. Sika Corporation, Construction Products Division; SikaSil-C990.
d. Tremco Incorporated; Spectrem 1.

C. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 50, Use NT.

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

a. BASF Building Systems; Omniseal 50.
b. Pecora Corporation; 864.
c. Sika Corporation, Construction Products Division; SikaSil-C995.
d. Tremco Incorporated; Spectrem 2.

2.7 MISCELLANEOUS GLAZING MATERIALS

A. General: Provide products of material, size, and shape complying with referenced glazing standard, 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).

F. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

G. Perimeter Insulation for Fire-Resistive Glazing: Product that is approved by testing agency that listed and labeled fire-resistant glazing product with which it is used for application and fire-protection rating indicated.

2.8 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.

2.9 INSULATING-GLASS TYPES

A. Glass Type: Refer to Glass Schedule on Drawings.

2.10 MONOLITHIC GLASS TYPES

A. Refer to Drawings for types and location.

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 will 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. 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 thicknesses, with reasonable tolerances.

C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.

E. 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.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. 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.

H. 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.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics.

J. Set glass lites with proper orientation so that coatings face exterior or interior as specified.

K. 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.

L. 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.

3.4 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.

3.5 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.

3.6 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.

3.7 CLEANING AND PROTECTION

A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels and clean surfaces.

B. Protect glass from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass, remove substances immediately as recommended in writing by glass manufacturer.

C. 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; remove as recommended in writing by glass manufacturer.

D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

E. Wash glass on both exposed surfaces in each area of Project 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.

END OF SECTION 088000

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

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

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide non-structural metal framing by one of the following:

1. AllSteel Products, Inc.
2. Dale/Incor.
3. MarinoWare; a division of Ware Industries.
4. Clark Dietrich

2.2 FRAMING SYSTEMS

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

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
2. Protective Coating: Hot-dip galvanized unless otherwise indicated.

B. Studs and Runners:

1. Steel Studs and Runners:

a. Stud Metal Thickness : galvanize 18 gage (0.0516 inches)

b. Soffit & Fascia Thickness: galvanized 20 gage (0.0359 inches)
c. Depth: As indicated on Drawings
d. No dimpled steel framing members are to be used on this project

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

1. Minimum Base-Metal Thickness: 0.033 inch (0.84 mm)

D. Cold-Rolled Channel Bridging: Steel, 0.053-inch (1.34-mm) minimum base-metal thickness, with minimum 1/2-inch- (13-mm-) wide flanges.

1. Depth: Minimum as indicated on the drawings
2. Clip Angle: Not less than 1-1/2 by 1-1/2 inches (38 by 38 mm), 0.068-inch- (1.72-mm-) thick, galvanized steel.

E. Hat-Shaped, Rigid Furring Channels: ASTM C 645.

1. Minimum Base-Metal Thickness: 0.033 inch (0.84 mm)

2. Depth: 7/8 inch (22.2 mm) or as indicated on Drawings

F. Cold-Rolled Furring Channels: 0.053-inch (1.34-mm) uncoated-steel thickness, with minimum 1/2-inch- (13-mm-) wide flanges.

1. Depth: As indicated on Drawings
2. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum uncoated-steel thickness of 0.033 inch (0.8 mm).
3. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- (1.59-mm-) diameter wire, or double strand of 0.048-inch- (1.21-mm-) diameter wire.

G. Z-Shaped Furring: With slotted or non-slotted web, face flange of 1-1/4 inches (32 mm), wall attachment flange of 7/8 inch (22 mm), minimum uncoated-metal thickness of 0.018 inch (0.45 mm), and depth required to fit insulation thickness indicated.

2.3 SUSPENSION SYSTEMS

A. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- (1.59-mm-) diameter wire, or double strand of 0.048-inch- (1.21-mm-) diameter wire.

B. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.16 inch (4.12 mm) in diameter.

C. Carrying Channels: Cold-rolled, commercial-steel sheet with a base-metal thickness of 0.053 inch (1.34 mm) and minimum 1/2-inch- (13-mm-) wide flanges.

1. Depth: As indicated on Drawings

2.4 AUXILIARY MATERIALS

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

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

B. Fasteners: Provide fasteners of type, material, size corrosion resistance, holding power, and other properties required to fasten steel framing and furring members securely to substrates involved.

C. Power Actuated Fasteners in Concrete: Fastener capable of type suitable for application indicated, fabricated from corrosion resistant materials with clips for attaching hangers, and with capability to sustain, without failure, a load equal to 10 times that imposed by ceiling construction, as determined by testing according to ASTM E 1190 conducted by qualified independent testing agency.

PART 3 - EXECUTION

3.1 EXAMINATION

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

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

3.2 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754.
1. Gypsum 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.

3.3 INSTALLING FRAMED ASSEMBLIES

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

1. Single-Layer Application: 16 inches (406 mm) o.c. unless otherwise indicated.

B. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.

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

D. 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. 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 (13-mm) 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.

2. 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.

E. Direct Furring:
1. Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches (610 mm) o.c.

F. Z-Furring Members:

1. Erect insulation specified in Section 072100 "Thermal Insulation" vertically and hold in place with Z-furring members spaced 24 inches (610 mm) 600 mm o.c.
2. Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches (610 mm) o.c.
3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw-attach short flange of furring channel to web of attached channel. At interior corners, space second member no more than 12 inches (305 mm) from corner and cut insulation to fit.

G. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch (3 mm) from the plane formed by faces of adjacent framing.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Interior gypsum board.

B. Related Requirements:
1. Section 092216 "Non-Structural Metal Framing" for non-structural framing and suspension systems that support gypsum board panels.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1.4 DELIVERY, STORAGE AND HANDLING

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

1.5 FIELD CONDITIONS

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

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

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

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

PART 2 - PRODUCTS

2.1 GYPSUM BOARD, GENERAL

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

2.2 INTERIOR GYPSUM BOARD

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

1. Georgia-Pacific Gypsum LLC.
2. National Gypsum Company.
3. USG Corporation.

B. Abuse-Resistant Gypsum Board: ASTM C 1629/C 1629M, Level 1 at all locations except cafeteria and gymnasium shall have Level 2.

1. Core: 5/8 inch (15.9 mm), Type X.
2. Long Edges: Tapered.
3. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.
4. Uses: install at all locations calling for gypsum wallboard other than toilet rooms

2.3 TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
2. Shapes:

a. Cornerbead.
b. LC-Bead: J-shaped; exposed long flange receives joint compound.
c. L-Bead: L-shaped; exposed long flange receives joint compound.
d. Expansion (control) joint.

2.4 JOINT TREATMENT MATERIALS

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

B. Joint Tape:

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

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

1. Prefilling: At open joints, 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.

D. Joint Compound for Tile Backing Panels:

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

2.5 AUXILIARY MATERIALS

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

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

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) 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 including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.

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

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

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install 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.

C. 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.

D. Form control and expansion joints with space between edges of adjoining gypsum panels.

E. 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. (0.7 sq. m) 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- (6.4- to 9.5-mm-) wide joints to install sealant.

F. 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.

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

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

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Single-Layer Application:
1. On partitions/walls, apply gypsum panels 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.

2. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
3. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

B. Multilayer Application:
1. On partitions/walls, apply gypsum board indicated for base layers and face layers horizontally (perpendicular 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.

2. 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.
3. Fastening Methods: Fasten base layers and face layers separately to supports with screws.

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. Interior Trim: Install in the following locations:

1. Cornerbead: Use at outside corners unless otherwise indicated.
2. LC-Bead: Use at exposed panel edges.
3. L-Bead: Use at location to receive trim.

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 for trim products specifically indicated as not intended to receive tape.

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

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.

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

3.6 PROTECTION

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

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

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

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

END OF SECTION 092900

SECTION 116625 – SAFETY WALL PADDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following gymnasium equipment:
   1. Safety pads.

1.3 ACTION SUBMITTALS

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

   1. If applicable, include assembly, disassembly, and storage instructions for removable equipment.

B. Shop Drawings: Include plans, elevations, sections, details, attachments to other work, and the following:
   1. Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Initial Selection: For each type of gymnasium equipment indicated. Provide real color samples no paper copies will be accepted.

D. Samples for Verification: For the following products:
   1. Pad Fabric: Not less than 3 inches (76 mm) square, with specified treatments applied. Mark face of material.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Court layout plans, drawn to scale, and coordinating floor inserts, game lines, and markers applied to finished flooring.

B. Warranty: Special warranty specified in this Section.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not install wall pads until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1.6 COORDINATION

A. Coordinate installation of wall pads with wall conditions and other construction including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Castings and Hangers: Malleable iron, ASTM A 47/A 47M, grade required for structural loading.

B. Composite Wood Products: Products shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Softwood Plywood: DOC PS 1, exterior.

D. Equipment Wall-Mounting Board: Wood, finish, size, and quantity as required to mount equipment according to manufacturer's written instructions.

E. Anchors, Fasteners, Fittings and Hardware: Manufacturer's standard corrosion-resistant or non-corrodible units; concealed vandal- and theft-resistant design.

2.2 SAFETY PADS

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

C. Basis-of-Design Product: Subject to compliance with requirements, provide Porter Athletic Equipment Company model 575000 or a comparable product by one of the following:

1. Draper Inc.
2. Jaypro Sports, LLC.
3. Mancino

D. Safety Pad Surface-Burning Characteristics: ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Flame-Spread Index: 25 or less.
2. Smoke-Developed Index: 450 or less.

E. Pad Coverings: Provide safety pad fabric covering fabricated from puncture- and tear-resistant, not less than 14-oz./sq. yd (475-g/sq. m) PVC-coated polyester or nylon-reinforced PVC fabric

treated with fungicide for mildew resistance; with surface-burning characteristics indicated, and lined with fire-retardant liner.

F. Wall Safety Pads: Padded wall wainscot panels designed to be attached in a continuous row; each panel section consisting of fill laminated to backer board with visible surfaces fully covered by seamless fabric covering, free of sag and wrinkles and firmly attached to back of backer board.

1. Backer Board: Not less than 3/8-inch- (9.5-mm-) thick fire-retardant-treated plywood per AWPA C27, Interior Type A.
2. Fire-Resistive Fill: Multiple-impact-resistant foam not less than 2-inch- (50-mm-) thick fire-resistive neoprene, 6.0-lb/cu. ft. (96-kg/cu. m) density.
3. Size: Each panel section, 24 inches (600 mm) wide by not less than 72 inches (1800 mm) long.
4. Installation Method: Concealed mounting Z-clips.
5. Fabric Covering Color(s): As selected by Architect from manufacturer's full range for two colors.

G. Corner Wall Safety Pads: Wall corner pad consisting of not less than 1-1/4-inch- (32-mm-) thick, multiple-impact-resistant, closed-cell polyethylene-foam filler, covered on both sides and all edges by fabric covering with backer board and manufacturer's standard anchorage to wall.

1. Length: Each pad matching length of wall safety pads.
2. Fabric Covering Color(s): Match color of wall safety pads.

H. Column Safety Pads: Pads covering exposed face of columns to height indicated, consisting of not less than 1-1/4-inch- (32-mm-) thick, multiple-impact-resistant, closed-cell polyethylene-foam filler, covered on both sides and all edges by fabric covering with backer board and manufacturer's standard anchorage to column

1. Length: Each pad matching length of wall safety pads as indicated.
2. Fabric Covering Color(s): Match color of wall safety pads.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for layout, alignment of mounting substrates, installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance.

1. Verify critical dimensions.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Comply with manufacturer's written installation instructions and competition rules indicated for each type of gymnasium equipment. Complete equipment field assembly, where required.

B. Unless otherwise indicated, install wall pads after other finishing operations, including painting, have been completed.

C. Wall Corner Column Safety Pads: Mount with bottom edge at 4 inches (102 mm) above finished floor.

3.3 CLEANING

A. After completing wall padding installation, inspect components. Remove spots, dirt, and debris and touch up damaged shop-applied finishes according to manufacturer's written instructions.

B. Replace wall padding and finishes that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION 116625

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on the following interior substrates:
   1. Steel.
   2. Wood.
   3. Gypsum board.

B. This specification relates to the technical requirements for furnishing all labor, materials, equipment and related items necessary to complete all painting work as indicated on the drawings and described in this specification. Paint all existing painted surfaces and new construction. The Work of this section includes but is not limited to the following (for rooms listed below):

   1. Preparing all surfaces, new and existing called for to be painted.
   2. Painting all exposed surfaces not noted to receive another finish unless otherwise indicated on the drawings.
   3. Painting metal trim.
   4. Painting miscellaneous metals.
   5. Painting existing concrete block walls and partitions.
   6. Painting existing and new drywall, new and existing plaster.
   7. Furnishing of all scaffolds, drop cloths, and similar appurtenances to perform work.
   8. Touching up and cleaning.

   Rooms to be Painted:

   1. Base Bid: Prepare and paint all existing corridor door frames on corridor side and room interior side.
   2. Alternate Bid No. 1: Prepare and paint all existing room interior door frames on both sides of door frame.

   This Section includes surface preparation and field painting of the following:

   1. Exposed exterior and interior items and surfaces.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels, unless otherwise indicated.
   1. Primers listed in the paint schedule are in addition to shop applied primers specified in other Sections.

D. Related Requirements:
   1. Division 06 Sections for shop priming carpentry with primers specified in this Section.

1.3 DEFINITIONS

A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

G. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

H. DFM (Dry Film Mils): Thickness, measured in mils, of a coat of paint in a cured state.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples for Initial Selection: For each type of topcoat product.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials**,** from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

   1. Paint: 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.
   2. Coating Maintenance Manual: Upon conclusion of the project, the Contractor or paint manufacturer/supplier shall furnish a coating maintenance manual, such as Sherwin-Williams “Custodian Project Color and Product Information” report or equal. Manual shall include an Area Summary with finish schedule, Area Detail designating where each product/color/finish was used, product data pages, Material Safety Data Sheets, care and cleaning instructions, touch-up procedures, and color samples of each color and finish used.

1.6 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.

1.7 FIELD 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.

C. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

D. Provide adequate ventilation, including mechanical ventilation, to remove paint odors and fumes from areas of the building where odors might migrate to occupied spaces. If required, provide continuous ventilation and sufficient heating facilities to maintain temperatures above 50 degrees Fahrenheit for 24 hours before, during, and 48 hours after the application of finishes.

E. Provide temporary lighting to achieve a well-lit surface with a level of at least 80 foot candles measured mid-height.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Sherwin-Williams Company (The)
2. PPG Paints
3. Benjamin Moore & Co.

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: Match Architect's samples

2.3 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove non-complying 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.

B. Applicator Qualifications: Engage an experienced applicator with at least 5 years of experience and who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.
1. Maintain throughout duration of the Work a crew of painters who are fully qualified to satisfy requirements of the Specifications.

C. Materials: Provide all coating materials required by this Section as produced by a single manufacturer, unless otherwise required or approved.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
2. Report in writing to the Architect prior to the start of painting, any condition that may affect proper application.
3. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

2. Notify the Architect about anticipated problems using the materials specified over substrates primed by others.
2. Test shop applied primers for compatibility with subsequent cover materials.
3. Where materials are applied over previously painted surfaces, apply samples and perform in-place test to check for compatibility, adhesion and film integrity of the new materials to existing painted surfaces. Report in writing and condition that may affect application, appearance or performance of the paint.

C. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMU): 12 percent.
3. Wood: 15 percent.
4. Gypsum Board: 12 percent.
5. Plaster: 12 percent.

D. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

E. Plaster Substrates: Verify that plaster is fully cured.

F. Spray-Textured Ceiling Substrates: Verify that surfaces are dry.

G. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

H. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and re-prime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer**.** but not less than the following:

1. SSPC-SP 2, "Hand Tool Cleaning."
2. SSPC-SP 3, "Power Tool Cleaning."
3. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
4. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."

E. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

F. 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.

G. Aluminum Substrates: Remove loose surface oxidation.

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.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

B. 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. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

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.

E. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.

1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.6 INTERIOR PAINTING SCHEDULE

A. Steel Substrates:

SW	Primer:	ProCryl Universal Metal Primer
	1st coat:	ProIndustrial DTM Acrylic finish, semi-gloss
	2nd coat:	ProIndustrial DTM Acrylic finish, semi-gloss

Replace DTM with ProIndustrial WB Alykd Urethane Enamel, B3 at handrails and guardrails

PPG	Primer:	DTM Primer 907-12*
	1st coat:	DTM Finish 907-12*
	2nd coat:	DTM Finish 907-12*

- * PPG Pitthane Ultra Gloss 95-8000 for primer and finish coats at handrails and guardrails.

A. Galvanized-Metal Substrates:

SW	Primer:	ProCryl Universal Metal Primer
	1st coat:	ProIndustrial DTM Acrylic finish
	2nd coat:	ProIndustrial DTM Acrylic finish
PPG	Primer:	DTM Primer 907-12*
	1st coat:	DTM Finish 907-12*
	2nd coat:	DTM Finish 907-12*

- * PPG Pitthane Ultra Gloss 95-8000 for primer and finish coats at handrails and guardrails.

B. Aluminum (Not Anodized or Otherwise Coated) Substrates:

SW	Primer:	ProCryl Universal Metal Primer
	1st coat:	ProIndustrial DTM Acrylic finish
	2nd coat:	Proindustrial DTM Acrylic finish
PPG	Primer:	DTM Primer 907-12*
	1st coat:	DTM Finish 907-12*
	2nd coat:	DTM Finish 907-12*

- * PPG Pitthane Ultra Gloss 95-8000 for primer and finish coats at handrails and guardrails.

H. Wood, Non-Traffic, pigmented finish

Acrylic Latex, semi gloss.

BM	Primer:	Ultra Spec 500 Interior Latex Primer N534
	1st coat:	Ultra Spec 500 Interior Latex Semi-Gloss N539
	2nd coat:	Ultra Spec 500 Interior Latex Semi-Gloss N539
S/W	Primer:	Mulit Purpose Primer
	1st coat:	ProMar 200 Zero VOC Latex Semi-Gloss
	2nd coat:	ProMar 200 Zero VOC Latex Semi-Gloss
PPG	Primer:	SPEEDHIDE® Pro-EV Zero Interior Latex Primer 12-900XI
	1st coat:	Speedhide Zero Interior Latex Semi-Gloss. 6-4510XI Series
	2nd coat:	Speedhide Zero Interior Latex Semi-Gloss. 6-4510XI Series

I. Gypsum Board and or Plaster Substrates:

Water-base epoxy, semi-gloss. (Apply at all Corridors, Toilet Rooms, Kitchen, Locker Rooms , & Janitor Closets if Gypsum Wall board forms the finished surface).

BM	Primer:	Ultra Spec 500 Interior Latex Primer N534
	1st coat:	Corotech Pre-Catalyzed Waterborne Epoxy Semi-gloss V341
	2nd coat:	Corotech Pre-Catalyzed Waterborne Epoxy Semi-gloss V341
SW	Primer:	ProMar 200 zero VOC primer
	1st coat:	ProIndustrial Pre-Catalyzed WasterBased Epoxy
	2nd coat:	ProIndustrial Pre-Catalyzed WasterBased Epoxy
PPG	Primer:	Seal Grip 17-921XI

	1st coat:	Aquapon WB EP 98E-1
	2nd coat:	Aquapon WB EP 98E-1

2. Acrylic Latex Semi-Gloss

BM	Primer:	Ultra Spec 500 Interior Latex Primer N534
	1st coat:	Ultra Spec 500 Interior Latex Semi-Gloss N539
	2nd coat:	Ultra Spec 500 Interior Latex Semi-Gloss N539
SW	Primer:	ProMar 200 Zero VOC Primer
	1st coat:	ProMar 200 zero VOC Latex Semi-gloss
	2nd coat:	ProMar 200 zero VOC LatexSemi-Gloss
PPG	Primer:	SPEEDHIDE® Pro-EV Zero Interior Latex Primer 12-900XI
	1st coat:	Speedhide Zero Interior Latex Semi-Gloss. 6-4510XI Series
	2nd coat:	Speedhide Zero Interior Latex Semi-Gloss. 6-4510XI Series

END OF SECTION 099123

SECTION 116625 – SAFETY WALL PADDING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes the following gymnasium equipment:
   1. Safety pads.

1.3 ACTION SUBMITTALS

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

   1. If applicable, include assembly, disassembly, and storage instructions for removable equipment.

B. Shop Drawings: Include plans, elevations, sections, details, attachments to other work, and the following:
   1. Include plans, elevations, sections, details, and attachments to other work.

C. Samples for Initial Selection: For each type of gymnasium equipment indicated. Provide real color samples no paper copies will be accepted.

D. Samples for Verification: For the following products:
   1. Pad Fabric: Not less than 3 inches (76 mm) square, with specified treatments applied. Mark face of material.

1.4 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Court layout plans, drawn to scale, and coordinating floor inserts, game lines, and markers applied to finished flooring.

B. Warranty: Special warranty specified in this Section.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not install wall pads until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

1.6 COORDINATION

A. Coordinate installation of wall pads with wall conditions and other construction including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Castings and Hangers: Malleable iron, ASTM A 47/A 47M, grade required for structural loading.

B. Composite Wood Products: Products shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Softwood Plywood: DOC PS 1, exterior.

D. Equipment Wall-Mounting Board: Wood, finish, size, and quantity as required to mount equipment according to manufacturer's written instructions.

E. Anchors, Fasteners, Fittings and Hardware: Manufacturer's standard corrosion-resistant or non-corrodible units; concealed vandal- and theft-resistant design.

2.2 SAFETY PADS

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

C. Basis-of-Design Product: Subject to compliance with requirements, provide Porter Athletic Equipment Company model 575000 or a comparable product by one of the following:

1. Draper Inc.
2. Jaypro Sports, LLC.
3. Mancino

D. Safety Pad Surface-Burning Characteristics: ASTM E 84 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Flame-Spread Index: 25 or less.
2. Smoke-Developed Index: 450 or less.

E. Pad Coverings: Provide safety pad fabric covering fabricated from puncture- and tear-resistant, not less than 14-oz./sq. yd (475-g/sq. m) PVC-coated polyester or nylon-reinforced PVC fabric

treated with fungicide for mildew resistance; with surface-burning characteristics indicated, and lined with fire-retardant liner.

F. Wall Safety Pads: Padded wall wainscot panels designed to be attached in a continuous row; each panel section consisting of fill laminated to backer board with visible surfaces fully covered by seamless fabric covering, free of sag and wrinkles and firmly attached to back of backer board.

1. Backer Board: Not less than 3/8-inch- (9.5-mm-) thick fire-retardant-treated plywood per AWPA C27, Interior Type A.
2. Fire-Resistive Fill: Multiple-impact-resistant foam not less than 2-inch- (50-mm-) thick fire-resistive neoprene, 6.0-lb/cu. ft. (96-kg/cu. m) density.
3. Size: Each panel section, 24 inches (600 mm) wide by not less than 72 inches (1800 mm) long.
4. Installation Method: Concealed mounting Z-clips.
5. Fabric Covering Color(s): As selected by Architect from manufacturer's full range for two colors.

G. Corner Wall Safety Pads: Wall corner pad consisting of not less than 1-1/4-inch- (32-mm-) thick, multiple-impact-resistant, closed-cell polyethylene-foam filler, covered on both sides and all edges by fabric covering with backer board and manufacturer's standard anchorage to wall.

1. Length: Each pad matching length of wall safety pads.
2. Fabric Covering Color(s): Match color of wall safety pads.

H. Column Safety Pads: Pads covering exposed face of columns to height indicated, consisting of not less than 1-1/4-inch- (32-mm-) thick, multiple-impact-resistant, closed-cell polyethylene-foam filler, covered on both sides and all edges by fabric covering with backer board and manufacturer's standard anchorage to column

1. Length: Each pad matching length of wall safety pads as indicated.
2. Fabric Covering Color(s): Match color of wall safety pads.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for layout, alignment of mounting substrates, installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance.

1. Verify critical dimensions.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. General: Comply with manufacturer's written installation instructions and competition rules indicated for each type of gymnasium equipment. Complete equipment field assembly, where required.

B. Unless otherwise indicated, install wall pads after other finishing operations, including painting, have been completed.

C. Wall Corner Column Safety Pads: Mount with bottom edge at 4 inches (102 mm) above finished floor.

3.3 CLEANING

A. After completing wall padding installation, inspect components. Remove spots, dirt, and debris and touch up damaged shop-applied finishes according to manufacturer's written instructions.

B. Replace wall padding and finishes that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION 116625