# 5 CONT SS TERM BAR -THRU WALL FLASHING -4 PER WINDOW GALV 3 ½X4X¾ ∠ WD BLOCK AS REQ SEALANT -- SEALANT MTL WINDOWS - NON-EXPANDING SPRAY FOAM INSUL HEAD JAMB DETAIL / 1 1/2" = 1'-0" NON-EXPANDING - SPRAY FOAM INSUL MTL WINDOWS — WD BLOCK AS REQ PLYWD BLOCK AS REQ NON-COMP FILLER -MTL SILL -THRU WALL FLASHING -NEW BRICK TO MATCH EXIST -- PATCH & REPAIR EXIST AS REQ EXIST INTERIOR WALL -− ½" GWB EXIST CMU TOOTH-IN AS REQ -∕ 2½" MTL STUDS (TYP) - WD BLOCKING

### **WORK NOTES:**

REMOVE EXISTING WHITE BOARD AND TACK BOARD - TRANSFER TO OWNER PATCH AND REPAIR EXISTING GWB AS REQUIRED & PAINT ENTIRE LENGTH OF WALL.

— EXIST

— EXIST

- NEW CMU TO MATCH

EACH 4" OF MASONRY

VARIES - VIF

VARIES - VIF

2½" MTL STUDS

\_\_ @ 16" OC MAX

NEW CMU TO — MATCH EXIST THICKNESS

EXIST WALL

← PLAM STOOL

BELOW

- STRAP ANCHORS

AS REQUIRED

✓ WD BLOCKING

┌ MTL WINDOW

— NON EXPANDING

SPRAY FOAM INSUL

/- SEALANT

EXIST BRICK TOOTH-IN AS REQ —

EXIST THICKNESS

CLG - VIF

WALL - VIF

— PATCH EXIST

GWB AS REQ

— 2½" MTL STUDS

@ 16" OC MAX

4'-0" M.O.

 $\left(\begin{array}{c} D \\ A-1 \end{array}\right)$ 

(A-1)

EXIST CMU TOOTH-IN AS REQ

EXIST BRICK TOOTH-IN AS REQ

WINDOW JAMB DETAIL

½" GWB ⁻

- 2½" MTL STUDS 1 @16" OC (TYP)

STRAP ANCHORS

AS REQUIRED

WD BLOCKING ·

MTL WINDOW ¬

NON EXPANDING —

SPRAY FOAM INSUL

SEALANT ·

WD BLOCKING -

- REMOVE EXISTING BRICK & CMU BACK UP AS REQUIRED FOR INSTALLATION OF NEW TOOTH-IN NEW BRICK TO REBUILD MASONRY OPENING TO DIMENSIONS AS REQUIRED BY
- REMOVE EXISTING INTERIOR WALLS AS REQUIRED FOR INSTALLATION OF NEW WINDOWS. INSTALL NEW GWB PARTITIONS AS INDICATED ON IN PLANS. PATCH AND REPAIR EXISTING COORDINATE REQUIRED DIMENSIONS WITH WINDOW MANUFACTURERS REQUIREMENTS.
- CUT DOWN THE EXISTING TREE & REMOVE STUMP..

## **GENERAL NOTES:**

- 1. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE W/ THE MA STATE BUILDING CODE 780 CMR - SEVENTH EDITION, LOCAL BYLAWS AND/OR ORDINANCES, MA ARCHITECTURAL ACCESS BOARD 521CMR AND THE AMERICAN DISABILITY ACT.
- 2. THE CONTRACT SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS AND REPORT ALL DISCREPANCIES TO THE ARCHITECT PRIOR TO BEGINNING WORK.
- 3. THE CONTRACT SHALL SECURE ALL NECESSARY PERMITS AND LICENSES AS REQUIRED BY CODE & LOCAL ORDINANCES.
- 4. THE CONTRACTOR SHALL WORK IN CLEAN, ORGANIZED AND PROFESSIONAL MANNER AND SHALL BE RESPONSIBLE FOR MAINTAINING THE SAFETY AND SECURITY OF THE SITE DURING CONSTRUCTION.
- 5. THE CONTRACTOR SHALL BE ADVISED THAT THE OWNER WILL BE OCCUPYING PORTIONS OF THE BUILDING DURING CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR COORDINATION WITH THE OWNER WHEN PLANNED WORK MAY DISRUPT ON GOING OPERATIONS.

#### SELECTIVE DEMOLITION NOTES

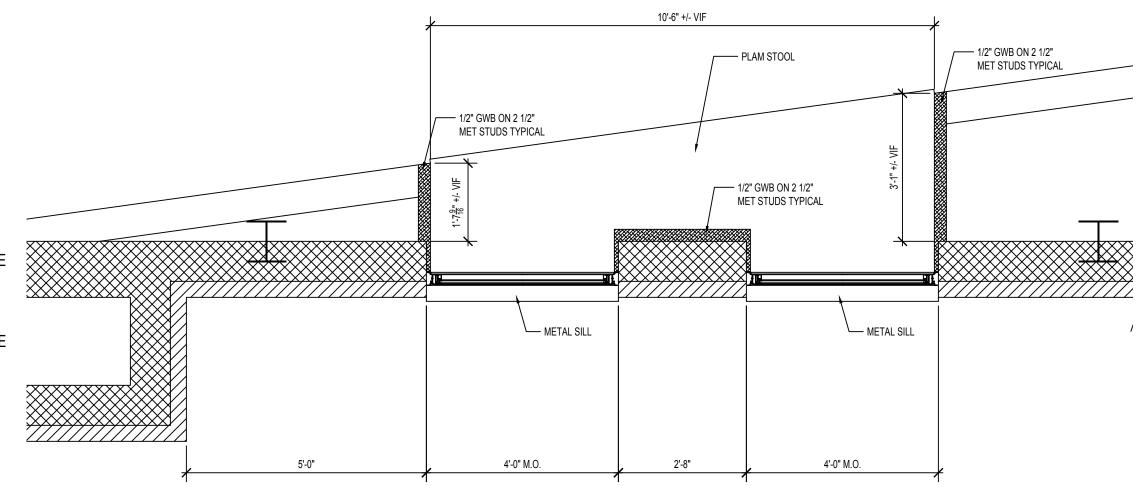
- 1. IN ADDITION TO THE WORK SPECIFICALLY SHOWN, CUT, MOVE OR REMOVE ITEMS AS NECESSARY TO PROVIDE ACCESS OR ALLOW ALTERATION AND NEW WORK TO PROCEED.
- 2. IN AREAS INCLUDED AS A PART OF THE CONTRACT, REPAIR OR REMOVE HAZARDOUS OR UNSANITARY CONDITIONS. REMOVE ABANDONED ITEMS SERVING NO USEFUL PURPOSE, SUCH AS ABANDONED PIPING, CONDUIT AND WIRING. REMOVE ALL ITEMS THAT PROTRUDE FROM WALL.
- CLEAN AND REMOVE SURFACE FINISHES AS NEEDED TO INSTALL NEW WORK AND FINISHES AS INDICATED.
- 4. PATCH, REPAIR AND REFINISH EXISTING WALLS TO REMAIN TO CONDITION REQUIRED FOR EACH NEW MATERIAL, WITH A WORKMAN-LIKE TRANSITION BETWEEN ADJACENT MATERIALS AND CONSTRUCTION.
- EXCEPT FOR ITEMS OR MATERIALS INDICATED TO BE REUSED, SALVAGED. REINSTALLED. OR OTHERWISE INDICATED TO REMAIN THE OWNER'S PROPERTY, DEMOLISHED MATERIALS SHALL BECOME THE CONTRACTOR'S PROPERTY AND SHALL BE REMOVED FROM THE SITE.

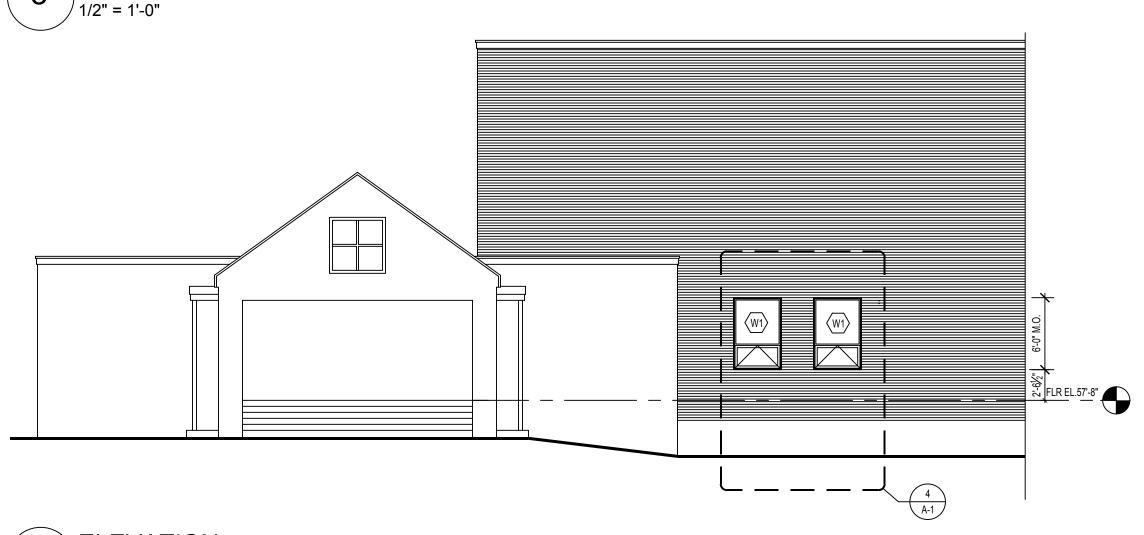
PARTITIAL ELEVATION

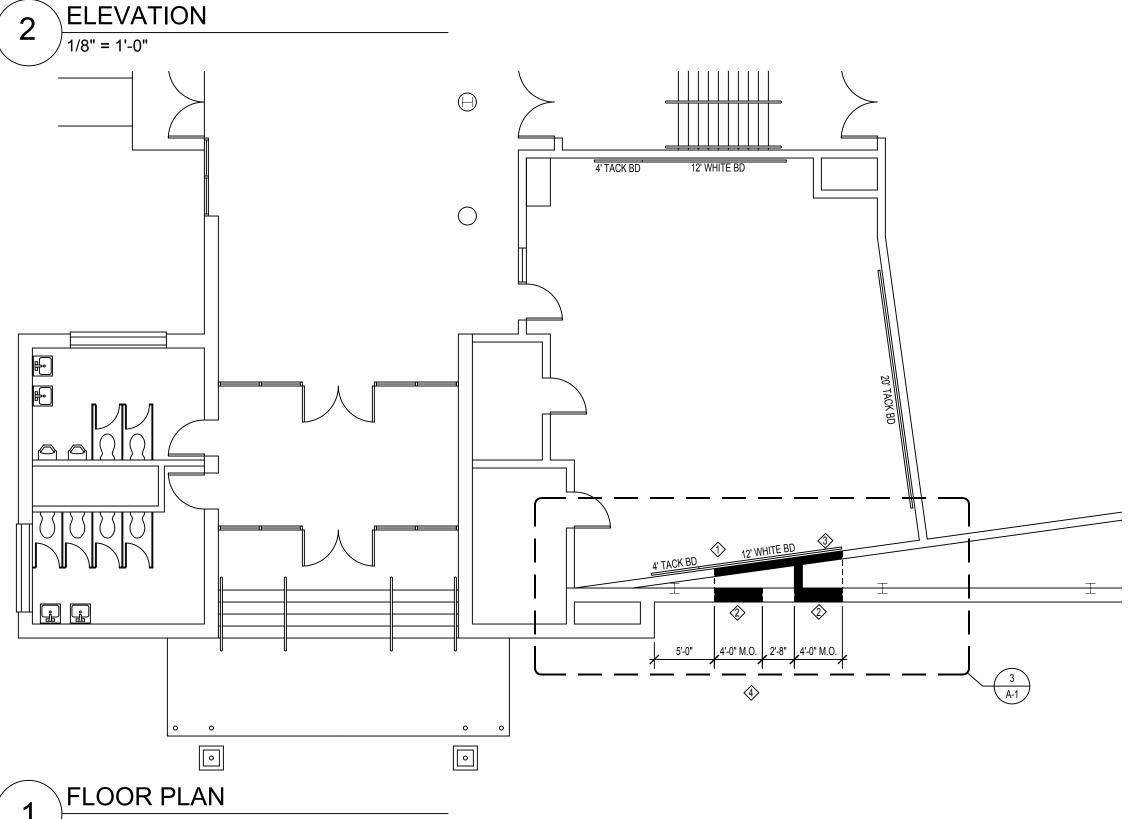
- THE CONTRACTOR SHALL PROVIDE TO THE OWNER DOCUMENTATION THAT ALL MATERIAL HAS BEEN LEGALLY DISPOSED OF AS REQUIRED BY ALL GOVERNING CODES AND REGULATIONS.
- 7. REPAIR MATERIALS SHALL BE SIMILAR TO EXISTING MATERIALS. WHERE IDENTICAL MATERIALS ARE UNAVAILABLE OR CANNOT BE USED FOR EXPOSED SURFACES, USE MATERIALS THAT VISUALLY MATCH EXISTING ADJACENT SURFACES TO THE FULLEST EXTENT POSSIBLE. USE ONLY MATERIALS WHOSE INSTALLED PERFORMANCE EQUAL OR SUPASSES THAT OF EXISTING MATERIALS.
- SURVEY EXISTING CONDITIONS AND COORDINATE THE REQUIREMENTS INDICATED TO DETERMINED EXTENT OF SELECTIVE DEMOLITION REQUIRED.
- VERIFY THAT UTILITIES IN WORK AREAS HAVE BE DISABLED, DISCONNECTED AND/OR CAPPED PER THE REQUIREMENTS OF THE CONTRACT.
- 10. SURVEY THE CONDITION OF THE BUILDING TO DETERMINE WHETHER REMOVING AN ELEMENT MIGHT RESULT IN AN UNSAFE CONDITION OR STRUCTURAL COLLAPSE. IMMEDIATELY REPORT FINDINGS TO OWNER'S REPRESENTATIVE.
- 11. DEMOLISH AND REMOVE EXISTING CONSTRUCTION ONLY TO THE EXTENT REQUIRED BY NEW CONSTRUCTION AND AS INDICATED. USE METHODS REQUIRED TO COMPLETE WORK WITH THE LIMITATIONS OF GOVERNING REGULATIONS AND AS FOLLOWS.
- A. NEATLY CUT OPENINGS AND HOLES PLUMB, SQUARE, AND TRUE TO DIMENSIONS REQUIRED. USE CUTTING METHODS LEAST LIKELY TO DAMAGE CONSTRUCTION TO REMAINING OR ADJOINING CONSTRUCTION. TO MINIMIZE DISTURBANCE OF ADJACENT SURFACES, USE HAND OR SMALL POWER TOOLS DESIGNED FOR SAWING OR GRINDING, NOT

\ PARTITIAL PLAN

- HAMMERING OR CHOPPING. B. DISPOSE OF DEMOLISHED ITEMS AND MATERIALS DAILY. DO NOT ALLOW DEMOLISHED MATERIAL TO ACCUMULATE ON-SITE.
- 12. SWEEP THE WORK AREA BROOM CLEAN EACH DAY AND ON COMPLETION OF SELECTIVE DEMOLITION OPERATIONS. CHANGE FILTERS ON AIR-HANDLING EQUIPMENT IN AREAS AFFECTED BY WORK.







# TLCR architecture

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WINDOW School High rnstable Ba Z

TOWN OF BARNSTABLE **Barnstable Public School** 835 Falmouth Road Hyannis, MA 02601

No. | Date Issue / Revision

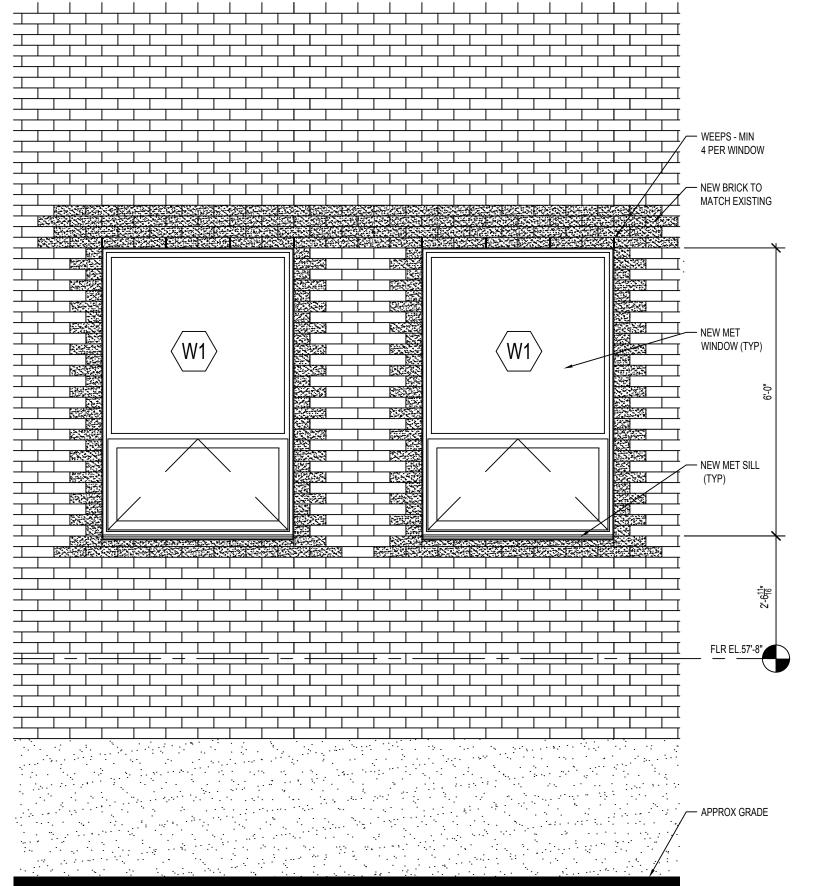
The contractor shall be responsible for the coordination of all field conditions, dimensions and componenets of the exisiting base building elements with the work as contained herein.

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Architect's Seal

FLOOR PLANS, **DETAILS & NOTES** 

Project no. 1002 AS NOTED Drawing no. 7-26-10 Drawn by PMW Checked by PMW



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disturb portions of Project site beyond areas in which the Work is indicated.
                                                                                                                       of materials lawfully
    C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in
                                                                                                                         . Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
        a weathertight condition throughout construction period. Repair damage caused by construction
                                                                                                                 B. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper
                                                                                                                       execution of the Work.
1.4 COORDINATION WITH OCCUPANTS

    Remove liquid spills promptly.

   A. Owner Occupancy: Owner will occupy the building during entire construction period. Cooperate with
                                                                                                                       2. Where dust would impair proper execution of the Work, broom-clean or vacuum the entire work area,
       Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work
                                                                                                                            as appropriate
        so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise
                                                                                                                       Installed Work: Keep installed work clean. Clean installed surfaces according to written instructions of
                                                                                                                       manufacturer or fabricator of product installed, using only cleaning materials specifically recommended. If
        1. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.
                                                                                                                       specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health
     WORK RESTRICTIONS
                                                                                                                       or property and that will not damage exposed surfaces.
   A. Work Restrictions, General: Comply with restrictions on construction operations.
                                                                                                                   D. Concealed Spaces: Remove debris from concealed spaces before enclosing the space.
                                                                                                                                                                                                                              SECTION 04 1001
   B. Controlled Substances: Use of tobacco products and other controlled substances on Project site is not
                                                                                                                E. Exposed Surfaces in Finished Areas: Clean exposed surfaces and protect as necessary to ensure
                                                                                                                                                                                                                              MASONRY
                                                                                                                        freedom from damage and deterioration at time of Substantial Completion.
                                                                                                                 F. During handling and installation, clean and protect construction in progress and adjoining materials already PART 1 - GENERAL
1.6 SPECIFICATION AND DRAWING CONVENTIONS
   A. Specification Content: The Specifications use certain conventions for the style of language and the
                                                                                                                      in place. Apply protective covering where required to ensure protection from damage or deterioration at
                                                                                                                                                                                                                                   Work Included: Provide labor, materials and equipment necessary to complete the work of this Section,
        intended meaning of certain terms, words, and phrases when used in particular situations. These
                                                                                                                                                                                                                                     including but not limited to the following:
        conventions are as follows:
                                                                                                                  G. Clean and provide maintenance on completed construction as frequently as necessary through the
         1. Imperative mood and streamlined language are generally used in the Specifications. The words
                                                                                                                       remainder of the construction period. Adjust and lubricate operable components to ensure operability
             "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is
                                                                                                                       without damaging effects.
             used within a sentence or phrase
                                                                                                                     STARTING AND ADJUSTING
         2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
                                                                                                                  A. Start equipment and operating components to confirm proper operation. Remove malfunctioning units
    B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all
                                                                                                                       replace with new units, and retest
        Sections in the Specifications
                                                                                                                       Adjust equipment for proper operation. Adjust operating components for proper operation without binding.
                                                                                                                                                                                                                                     PERFORMANCE REQUIREMENTS
   C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in
                                                                                                                   C. Test each piece of equipment to verify proper operation. Test and adjust controls and safeties. Replace
        detail in the Specifications. One or more of the following are used on Drawings to identify materials and
                                                                                                                                                                                                                                    Provide unit masonry that develops the following net-area compressive strengths (f/m) at 28 days.
                                                                                                                       damaged and malfunctioning controls and equipment.
                                                                                                                                                                                                                                     Determine compressive strength of masonry from net-area compressive strengths of masonry units and
                                                                                                               3.8 CORRECTION OF THE WORK
PART 2 - PRODUCTS (Not Used)
                                                                                                                 A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
PART 3 - EXECUTION (Not Used)
                                                                                                                     1. Repairing includes replacing defective parts, refinishing damaged surfaces, touching up with matching
                                                                                                                                                                                                                                    QUALITY ASSURANCE
                                                                                                                            materials, and properly adjusting operating equipment.
END OF SECTION
                                                                                                                                                                                                                                   Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a
                                                                                                                       Restore permanent facilities used during construction to their specified condition.
                                                                                                                                                                                                                                     uniform blend within the ranges accepted for these characteristics, through one source from a single
                                                                                                                  C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without
SECTION 01 7300
                                                                                                                       visible evidence of repair
EXECUTION
                                                                                                                                                                                                                                    Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for
                                                                                                                D. Repair components that do not operate properly. Remove and replace operating components that cannot
PART 1 - GENERA
1.1 SUMMARY
                                                                                                                                                                                                                                     producer for each aggregate.

    Remove and replace chipped, scratched, and broken glass or reflective surfaces.

                                                                                                                                                                                                                             PART 2 - PRODUCTS
   A. Section includes general administrative and procedural requirements governing execution of the Work
                                                                                                                                                                                                                             2.1 MASONRY UNITS, GENERAL
        including, but not limited to, the following:
                                                                                                                END OF SECTION

    Construction layout.

                                                                                                                                                                                                                               A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to exceed
          Installation of the Work
                                                                                                                SECTION 01 7700
                                                                                                               CLOSEOUT PROCEDURES
         Cutting and patching
        Progress cleaning
                                                                                                                PART 1 - GENERAL
                                                                                                                                                                                                                            2.2 BRICK
        Starting and adjusting.
                                                                                                               1.1 SUMMARY
                                                                                                                                                                                                                                   Provide shapes indicated and as follows:
       Correction of the Work.
                                                                                                                 A. Section includes administrative and procedural requirements for contract closeout, including, but not limited
                                                                                                                       to, the following:
    A. Cutting: Removal of in-place construction necessary to permit installation or performance of other work.

    Final cleaning

                                                                                                                                                                                                                               B. Face Brick: ASTM C 216, Grade SW, Type FBS
   B. Patching: Fitting and repair work required to restore construction to original conditions after installation of 1.2 LIST OF INCOMPLETE ITEMS (PUNCH LIST)
                                                                                                                                                                                                                                    1. Initial Rate of Absorption: Less than 30 g/30 sq. in. (30 g/194 sq. cm) per minute when tested per
                                                                                                                  A. Organization of List: Include name and identification of each space and area affected by construction
 1.3 QUALITY ASSURANCE
                                                                                                                        operations for incomplete items and items needing correction including, if necessary, areas disturbed by
   A. Cutting and Patching: Comply with requirements for and limitations on cutting and patching of construction
                                                                                                                       Contractor that are outside the limits of construction.
                                                                                                                           Organize list of spaces in sequential order, starting with exterior areas first.
        1. Visual Elements: Do not cut and patch construction in a manner that results in visual evidence of
                                                                                                                       2. Organize items applying to each space by major element, including categories for ceiling, individual
             cutting and patching. Do not cut and patch exposed construction in a manner that would, in
                                                                                                                            walls, floors, equipment, and building systems.
              Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that
                                                                                                                         3. Include the following information at the top of each page:
                                                                                                                                                                                                                             2.3 MORTAR MATERIALS
             has been cut and patched in a visually unsatisfactory manner.

 a. Project name.

                                                                                                                                                                                                                               A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction.
PART 2 - PRODUCTS
                                                                                                                           b. Date.
2.1 MATERIALS
                                                                                                                                                                                                                                     Provide natural color or white cement as required to produce mortar color indicated.

 c. Name of Architect.

   A. General: Comply with requirements specified in other Sections.

    Hydrated Lime: ASTM C 207, Type S.

 Name of Contractor.

                                                                                                                                                                                                                                   Aggregate for Mortar: ASTM C 144; except for joints less than 1/4 inch (6.5-mm) thick, use aggregate
   B. In-Place Materials: Use materials for patching identical to in-place materials. For exposed surfaces, use
                                                                                                                            e. Page number.
        materials that visually match in-place adjacent surfaces to the fullest extent possible.
                                                                                                                       4. Submit list of incomplete items in the following format:
       1. If identical materials are unavailable or cannot be used, use materials that, when installed, will provide

 a. PDF electronic file.

                                                                                                                                                                                                                               D. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar
             a match acceptable to the Architect for the visual and functional performance of in-place materials. PART 2 - PRODUCTS
PART 3 - EXECUTION
                                                                                                                                                                                                                                     mixes. Use only pigments with a record of satisfactory performance in masonry mortar.
                                                                                                               2.1 MATERIALS
3.1 EXAMINATION
                                                                                                                 A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the
   A. Examination and Acceptance of Conditions: Before proceeding with each component of the Work,
                                                                                                                       surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or
                                                                                                                                                                                                                                     2. Products: Subject to compliance with requirements, provide one of the following or approved equal:
        examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for
                                                                                                                       that might damage finished surfaces.
        compliance with requirements for installation tolerances and other conditions affecting performance.
                                                                                                               PART 3 - EXECUTION
                                                                                                                3.1 FINAL CLEANING
         1. Written Report: Where a written report listing conditions detrimental to performance of the Work is
                                                                                                               A. Perform final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and
                                                                                                                                                                                                                                    Water: Potable
                                                                                                                                                                                                                                   EMBEDDED FLASHING MATERIALS
             required by other Sections, include the following:
                                                                                                                       ordinances and Federal and local environmental and antipollution regulations.
                                                                                                                                                                                                                                   Concealed Flashing: For flashing partly exposed to the exterior, use metal flashing specified above. For

 Description of the Work.

                                                                                                                 B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or

 List of detrimental conditions, including substrates.

                                                                                                                       unit to condition expected in an average commercial building cleaning and maintenance program. Comply

    List of unacceptable installation tolerances.

                                                                                                                       with manufacturer's written instructions.

 Recommended corrections.

                                                                                                                      1. Complete the following cleaning operations before requesting inspection for certification of Substantial
        2. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or
                                                                                                                                                                                                                                     Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or
                                                                                                                           a. Remove tools, construction equipment, machinery, and surplus material from Project site.
         3. Examine roughing-in for mechanical and electrical systems to verify actual locations of connections
                                                                                                                           b. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains,
             before equipment and fixture installation
                                                                                                                                  films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces.
                                                                                                                                                                                                                                   MISCELLANEOUS MASONRY ACCESSORIES
        4. Examine walls, floors, and roofs for suitable conditions where products and systems are to be
                                                                                                                                  Restore reflective surfaces to their original condition.
                                                                                                                                                                                                                                    Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15
                                                                                                                            c. Clean transparent materials, glass windows. Remove glazing compounds and other noticeable,
       5. Proceed with installation only after unsatisfactory conditions have been corrected. Proceeding with
                                                                                                                                  vision-obscuring materials. Replace chipped or broken glass and other damaged transparent
                                                                                                                                                                                                                               B. Rectangular Plastic Weep/Vent Tubing: Clear butyrate, 3/8 by 1-1/2 by 3-1/2 inches (9 by 38 by 89-mm).
             the Work indicates acceptance of surfaces and conditions.
                                                                                                                                  materials. Polish glass, taking care not to scratch surfaces.
                                                                                                                                                                                                                             2.6 MASONRY CLEANERS
        PREPARATION

 Remove labels that are not permanent.

   A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck
                                                                                                                                                                                                                                   Job-Mixed Detergent Solution: Solution of 1/2-cup (0.14-L) dry measure tetrasodium polyphosphate and
                                                                                                                           e. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace
        measurements before installing each product. Where portions of the Work are indicated to fit to other
                                                                                                                                  finishes and surfaces that cannot be satisfactorily repaired or restored or that already show
                                                                                                                                                                                                                                    MORTAR MIXES
         construction, verify dimensions of other construction by field measurements before fabrication.
                                                                                                                                  evidence of repair or restoration.
                                                                                                                                                                                                                               A. Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent
    B. Space Requirements: Verify space requirements and dimensions of items shown diagrammatically on
                                                                                                                                Leave Project clean and ready for occupancy.
                                                                                                                                                                                                                                     agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
                                                                                                                END OF SECTION
   C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification
       of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit SECTION 024119
                                                                                                                                                                                                                               B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification, except limit materials to
                                                                                                                                                                                                                                     those specified herein, and limit cement/lime ratio (by volume) as follows:.
        a request for information to Architect according to requirements in Division 01 Section "Project
                                                                                                                SELECTIVE DEMOLITION
        Management and Coordination."
                                                                                                                                                                                                                                     1. For exterior, above-grade, load-bearing and non-load-bearing walls; for interior load-bearing walls; for
                                                                                                                PART 1 - GENERAL
 3.3 CONSTRUCTION LAYOUT
                                                                                                               1.1 SUMMARY
   A. Verification: Before proceeding to lay out the Work, verify layout information shown on Drawings, in

 A. Section Includes

        relation to the property survey and existing benchmarks. If discrepancies are discovered, notify Architect
                                                                                                                          Demolition and removal of selected portions of building.
                                                                                                                                                                                                                             PART 3 - EXECUTION
                                                                                                               1.2 DEFINITIONS
                                                                                                                 A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to 3.1 EXAMINATION
3.4 INSTALLATION
                                                                                                                                                                                                                               A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and PART 3 - EXECUTION
  A. Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
                                                                                                                     be removed and salvaged or removed and reinstalled
                                                                                                                                                                                                                                    other conditions affecting performance.

    Make vertical work plumb and make horizontal work level.

                                                                                                                B. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise
   B. Comply with manufacturer's written instructions and recommendations for installing products in
                                                                                                                                                                                                                                     1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to
                                                                                                                       indicated to be removed, removed and salvaged, or removed and reinstalled.
                                                                                                               1.3 SUBMITTALS
       Install products at the time and under conditions that will ensure the best possible results. Maintain
                                                                                                                A. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to
                                                                                                                                                                                                                                    INSTALLATION, GENERAL
        conditions required for product performance until Substantial Completion.
                                                                                                                       accept hazardous wastes
       Attachment: Provide blocking and attachment plates and anchors and fasteners of adequate size and 1.4 QUALITY ASSURANCE
                                                                                                                                                                                                                                   Thickness: To match existing.
        number to securely anchor each component in place, accurately located and aligned with other portions of A. Standards: Comply with ANSI A10.6 and NFPA 241.
        the Work. Where size and type of attachments are not indicated, verify size and type required for load 1.5 PROJECT CONDITIONS
                                                                                                                                                                                                                                     to provide a continuous pattern and to fit adjoining construction. Where possible, use full-size units without
                                                                                                                   A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct
                                                                                                                                                                                                                                   Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
        1. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for
                                                                                                                        selective demolition so Owner's operations will not be disrupted
                                                                                                                                                                                                                             3.3 CONSTRUCTION TOLERANCES
             installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral
                                                                                                                B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with
             anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time
                                                                                                                                                                                                                                    Vertical and horizontal lines are to match existing.
                                                                                                                       selective demolition.
                                                                                                                                                                                                                                   MORTAR BEDDING AND JOINTING
             for installation.
                                                                                                                 C. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
13.5 CUTTING AND PATCHING
                                                                                                                     1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately A. Lay hollow masonry units as follows:
   A. Cutting and Patching, General: Employ skilled workers to perform cutting and patching. Proceed with
                                                                                                                            notify Architect and Owner. Owner will remove hazardous materials under a separate contract.
        cutting and patching at the earliest feasible time, and complete without delay.
                                                                                                                                                                                                                               B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill
                                                                                                                PART 2 - PRODUCTS (Not Used)
        1. Cut in-place construction to provide for installation of other components or performance of other
                                                                                                                                                                                                                                     head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
                                                                                                              PART 3 - EXECUTION
                                                                                                                                                                                                                               C. Joint Size: Nominal 3/8 inch, or to match existing.
             construction, and subsequently patch as required to restore surfaces to their original condition.
                                                                                                                                                                                                                               D. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than the joint thickness.
```

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate physical

retained adjoining construction in a manner that will minimize evidence of patching and refinishing.

patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish,

color, texture, and appearance. Remove in-place floor and wall coverings and replace with new

intermediate paint coats appropriate for substrate over the patch, and apply final paint coat over

selective demolition

Face brick.

Mortar and grout.

Ties and anchors.

Embedded flashing

Miscellaneous masonry accessories

6. Cutting and patching to fit the several parts together and to integrate with other work.

exposed masonry, from one manufacturer for each cementitious component and from one source or

tolerances and to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not

uses units where such defects, including dimensions that vary from specified dimensions by more than

Efflorescence: Provide brick that has been tested according to ASTM C 67 and is rated "not

for similar applications that would otherwise expose unfinished brick surfaces.

Application: Use where brick is exposed, unless otherwise indicated.

White-Mortar Aggregates: Natural white sand or ground white stone.

c. SGS Mortar Colors; Solomon Grind-Chem Services, Inc.

flashing not exposed to the exterior, use the following, unless otherwise indicated:

1/2-cup (0.14-L) dry measure laundry detergent dissolved in 1 gal. (4 L) of water.

Proceed with installation only after unsatisfactory conditions have been corrected.

cutting. Install cut units with cut surfaces and, where possible, cut edges concealed.

With face shells fully bedded in mortar and with head joints of depth equal to bed joints.

A. Anchor masonry veneers to wall framing and concrete and masonry backup with masonry-veneer anchors

Fasten each anchor section to masonry backup with two metal fasteners of type indicated.

Do not use calcium chloride in mortar or grout

ANCHORING MASONRY VENEERS

to comply with the following requirements:

cement; 1 part hydrated lime; and 5 parts aggregate.

bonded with asphalt between 2 layers of glass-fiber cloth. Use only where flashing is fully concealed

interior non-load-bearing partitions; and for other applications where another type is not indicated, use

Type N mortar, minimum 750 psi at 28 days. Mortar proportions by volume shall be 1 part Portland

products recommended by the flashing manufacturer for bonding flashing sheets to each other and to

stated tolerances, will be exposed in the completed Work or will impair the quality of completed masonry.

Provide units without cores or frogs and with exposed surfaces finished for ends of sills and caps and

mortar types according to Tables 1 and 2 in ACI 530.1/ASCE 6/TMS 602.

For Brick Unit Masonry: f'm = 2500 psi (17.2 MPa).

Size (Actual Dimensions): To match existing.

graded with 100 percent passing the No. 16 (1.18-mm) sieve.

a. True Tone Mortar Colors; Davis Colors.

b. Centurion Pigments; Lafarge Corporation

Colors: To match existing.

entire unbroken surface containing the patch. Provide additional coats until patch blends with

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into

Floors and Walls: Where walls or partitions that are removed extend one finished area into another,

a. Where patching occurs in a painted surface, prepare substrate and apply primer and

4. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of

5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weathertight

A. Clean Project site and work areas daily, including common areas. Enforce requirements strictly. Dispose 3.4

F. Cleaning: Clean areas and spaces where cutting and patching are performed. Remove paint, mortar, oils,

A. Survey existing conditions and correlate with requirements indicated to determine extent of selective

people and damage to adjacent buildings and facilities to remain.

Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to

demolition required

3.2 PREPARATION

materials, if necessary, to achieve uniform color and appearance.

putty, and similar materials from adjacent finished surfaces.

integrity of installation.

3.6 PROGRESS CLEANING

**SECTION 01 1000** 

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1.3 ACCESS TO SITE

Access to site.

Work restrictions.

Related Requirements:

Coordination with occupants

1. Work covered by Contract Documents.

Specification and drawing conventions.

temporary use of Owner's facilities.

A. Contractor shall have limited use of Project site for construction.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

1. Division 01 Section "Temporary Facilities and Controls" for limitations and procedures governing

1. Installation of two (2) new aluminum windows in an existing wall, demolition, plastic laminate stools,

B. Use of Site: Limit use of Project site to areas within the affected by the work of this contract. Do not

Protection: Protect in-place construction during cutting and patching to prevent damage. Provide

protection from adverse weather conditions for portions of Project that might be exposed during cutting and

Adjacent Occupied Areas: Where interference with use of adjoining areas or interruption of free passage

to adjoining areas is unavoidable, coordinate cutting and patching in accordance with requirements of

A. The Work of Project is defined by the Contract Documents and consists of the following:

SUMMARY

Locate anchor sections to allow maximum vertical differential movement of ties up and down. Provide temporary weather protection, during interval between selective demolition of existing 3. Space anchors as indicated, but not more than 16 inches (406-mm) o.c. vertically and 16 inches construction on exterior surfaces installation of new materials, to prevent water leakage and damage (406-mm) o.c. horizontally. Install additional anchors within 12 inches (305-mm) of openings and at C. to structure and interior areas. intervals, not exceeding 8 inches (203-mm), around the perimeter. 2. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations A. Install steel lintels furnished under the Work of Section 05 1001, where indicated. 3. Cover and protect furniture, furnishings, and equipment that have not been removed. B. Provide minimum bearing of 8 inches (200-mm) at each jamb, unless otherwise indicated. SELECTIVE DEMOLITION, GENERAL 3.7 FLASHING, WEEP HOLES, AND VENTS Demolish and remove existing construction only to the extent required by new construction and as Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to 2.3 FABRICATION, GENERAL indicated. Use methods required to complete the Work within limitations of governing regulations and as downward flow of water in wall, and where indicated Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods B. Unless otherwise indicated, place through-wall flashing on sloping bed of mortar and cover with mortar. least likely to damage construction to remain or adjoining construction. Use hand tools or small Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance by flashing manufacturer. of adjacent surfaces. Temporarily cover openings to remain Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished Install flashing as follows: 1. At multiwythe masonry walls, including cavity walls, extend flashing from exterior face of outer wythe of masonry, through outer wythe, turned up a minimum of 8 inches (200-mm), and through inner Dispose of demolished items and materials promptly. wythe to within 1/2 inch (13-mm) of the interior face of the wall in exposed masonry. Where interior Existing Items to Remain: Protect construction indicated to remain against damage and soiling during surface of inner wythe is concealed by furring, carry flashing completely through inner wythe and turn 2.6 PLASTIC-LAMINATE WINDOW STOOLS SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS flashing up approximately 2 inches (50-mm), unless otherwise indicated. Concrete: Demolish in sections. Cut concrete full depth at junctures with construction to remain and at 2. At lintels, extend flashing a minimum of 4 inches (100-mm) into masonry at each end. At heads and regular intervals, using power-driven saw, then remove concrete between saw cuts. sills, extend flashing 4 inches (100-mm) at ends and turn flashing up not less than 2 inches (50-mm) DISPOSAL OF DEMOLISHED MATERIALS to form a pan. At sills, extend flashing over backup wall to back leg of window and jambs and turn up Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill. not less than 1/2 inch (13-mm) to form pan. 3. Extend sheet metal flashing 1/2 inch (13-mm) beyond face of masonry at exterior and turn flashing Do not allow demolished materials to accumulate on-site. down to form a drip. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas. . Disposal: Transport demolished materials off Owner's property and legally dispose of them.

4. Install metal drip edges beneath flashing at exterior face of wall. Stop flashing 1/2 inch (13-mm) back from outside face of wall and adhere flashing to top of metal drip edge. 5. Install metal flashing termination beneath flashing at exterior face of wall. Stop flashing 1/2 inch A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition (13-mm) back from outside face of wall and adhere flashing to top of metal flashing termination. operations. Return adjacent areas to condition existing before selective demolition operations began. Install weep holes in the head joints in exterior wythes of the first course of masonry immediately above embedded flashing and as follows: Use rectangular plastic tubing to form weep holes. Space weep holes formed from plastic tubing16 inches (400-mm) o.c. 3. Place cavity drainage material immediately above flashing in cavities. 3.8 REPAIRING, POINTING, AND CLEANING

A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application.

B. Wood Products: Comply with the following

a. Solid colors, matte finish.

a. Solid colors, matte finish.

b. Patterns, matte finish.

of type of woodwork involved.

matching filler where exposed.

Urethane joint sealants.

When joint substrates are wet.

URETHANE JOINT SEALANTS

a. Pecora Corporation; Dynatrol I-XI

c. Tremco Incorporated; Dymonic.

a. Bostik, Inc.; Chem-Calk 600.

b. Pecora Corporation; AC-20+.

on field experience and laboratory testing.

Provide self-adhesive tape where applicable.

JOINT SEALANT BACKING

sealants to joint substrates

PART 3 - EXECUTION

3.1 EXAMINATION

3.2 PREPARATION

Concrete.

a. Metal.

b. Glass.

c. Tremco Incorporated; Tremflex 834.

Latex ioint sealants.

PART 3 - EXECUTION

3.1 PREPARATION

3.2 INSTALLATION

PART 1 - GENERAL

1.2 SUMMARY

A. Section Includes:

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

1.3 PROJECT CONDITIONS

High-Pressure Decorative Laminate Grade: HGS.

b. Patterns, matte finish.

woodwork quality standard

2.2 MISCELLANEOUS MATERIALS

percent moisture content

1. Particleboard: ANSI A208.1, Grade M-2-Exterior Glue.

Fabricate woodwork to dimensions, profiles, and details indicated.

exposed laminate surfaces complying with the following requirements:

exposed laminate surfaces complying with the following requirements:

C. Edge Treatment: Same as laminate cladding on horizontal surfaces.

as required, including removal of packing and backpriming.

Part 2, to extent that it was not completed in the shop.

B. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible

Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

1. As selected by Architect from laminate manufacturer's full range in the following categories:

B. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of

As selected by Architect from manufacturer's full range in the following categories:

E. Core Material: Medium-density fiberboard made with exterior glue or exterior-grade plywood.

plumb (including tops) to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).

Before installation, condition woodwork to average prevailing humidity conditions in installation areas.

Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.

A. Attention is directed to the General And Supplemental Conditions of the Contract and all Sections within

2. Where joint widths are less than those allowed by joint-sealant manufacturer for applications

Where contaminants capable of interfering with adhesion have not yet been removed from joint

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

liquid-applied joint sealant specified, including those referencing ASTM C 920 classifications for type,

A. Single-Component, Nonsag, Urethane Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Use

Latex Joint Sealant: Acrylic latex or siliconized acrylic latex, ASTM C 834, Type OP, Grade NF.

1. Products: Subject to compliance with requirements, available products that may be incorporated into

Provide sealant backings of material that are nonstaining; are compatible with joint substrates, sealants,

B. Cylindrical Sealant Backings: ASTM C 1330, Type C (closed-cell material with a surface skin), and of size

A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to

B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and

primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based

and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

Bond-Breaker Tape: Polyethylene tape or other plastic tape recommended by sealant manufacturer for

preventing sealant from adhering to rigid, inflexible joint-filler materials or joint surfaces at back of joint.

joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

sealant backing materials, free of oily residues or other substances capable of staining or harming joint

substrates and adjacent nonporous surfaces in any way, and formulated to promote optimum adhesion of

Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent

A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements

A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with

out joints with oil-free compressed air. Porous joint substrates include the following:

B. Proceed with installation only after unsatisfactory conditions have been corrected.

joint-sealant manufacturer's written instructions and the following requirements:

water repellents, water, surface dirt, and frost.

Remove laitance and form-release agents from concrete.

bond; do not allow spillage or migration onto adjoining surfaces.

indicated, unless more stringent requirements apply.

applicable to materials, applications, and conditions indicated.

joint substrates include the following:

c. Glazed surfaces of ceramic tile.

3.3 INSTALLATION OF JOINT SEALANTS

for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.

. 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,

these methods to produce a clean, sound substrate capable of developing optimum bond with joint

Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain,

B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer. Apply primer to

Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining

required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

B. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as

A. Comply with joint-sealant manufacturer's written installation instructions for products and applications

surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods

harm substrates, or leave residues capable of interfering with adhesion of joint sealants. Nonporous

sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing

I. Products: Subject to compliance with requirements, available products that may be incorporated into

B. Liquid-Applied Joint Sealants: Comply with ASTM C 920 and other requirements indicated for each

A. Do not proceed with installation of joint sealants under the following conditions:

joint-sealant manufacturer, based on testing and field experience

grade, class, and uses related to exposure and joint substrates.

the Work include, but are not limited to, the following or equal:

the Work include, but are not limited to, the following or equal:

b. Sika Corporation, Construction Products Division; Sikaflex - 1a.

Division 1 - General Requirements which are hereby made a part of this Section of the Specifications.

H. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with

Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of

before shipment to Project site. Disassemble components only as necessary for shipment and installation.

B. Adhesive for Bonding Plastic Laminate: Contact cement.

C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and 3.3 ADJUSTING AND CLEANING smears before tooling joints. D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows: Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels. 2. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on END OF SECTION exposed surfaces. E. Protection: The General Contractor shall provide final protection and maintain conditions which ensure unit SECTION 07 9200 JOINT SEALANTS

masonry work being without damage and deterioration at time of Substantial Completion. MASONRY WASTE DISPOSAL A. Excess Masonry Waste: Remove excess, clean masonry waste that cannot be used as fill, as described 1.1 GENERAL PROVISIONS above, and other masonry waste, and legally dispose of off Owner's property. END OF SECTION SECTION 05 100 MISCELLANEOUS IRON

PART 1 - GENERAL 1.1 DESCRIPTION OF WORK A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following: Steel angle lintels. Galvanized steel angle lintels B. Items to be Furnished Only: Furnish the following items to be installed under the designated Sections: Section 04 1001 - Masonry:

 Loose steel lintels to be built into masonry. PART 2 - PRODUCTS 2.1 FERROUS METALS

A. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M. A. Shop Primer for Ferrous Metal: Organic zinc-rich primer, complying with SSPC-Paint 20 and compatible 1. Products: Subject to compliance with requirements, provide one of the following or equal: a. Carboline 621; Carboline Company.

 b. Aquapon Zinc-Rich Primer 97-670; PPG Industries, Inc. c. Tneme-Zinc 90-97; Tnemec Company, Inc. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with

C. Bituminous Paint: Cold-applied asphalt mastic complying with SSPC-Paint 12, except containing no asbestos fibers, or cold-applied asphalt emulsion complying with ASTM D 1187.

A. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior 2.3 LATEX JOINT SEALANTS 2.4 FABRICATION, GENERAL A. Shear metals cleanly and accurately. Remove burrs.

2.5 LOOSE STEEL LINTELS A. Fabricate loose structural-steel lintels from steel angles and shapes of size indicated on the drawings for openings in masonry walls at locations indicated. B. Size loose lintels to provide bearing length at each side of openings equal to one-twelfth of clear span, but not less than 8 inches (200 mm), unless otherwise indicated. C. Galvanize loose steel lintels located in exterior walls. 2.6 STEEL AND IRON FINISHES

1. Copper-Laminated Flashing: Laminated flashing consisting of 5-oz./sq. ft. (1.5-kg/sq. m) sheet copper A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. B. Galvanizing: Hot-dip galvanize all ferrous metal items exposed to the weather or on the exterior of the building using an enhanced galvanizing process including state of the art Quality Assurance/Quality Control methods. The hot-dip galvanized coating shall consist of zinc and other metals. Use the "dry kettle" process to prevent flux inclusions or entrapment. Use of a flux blanket on the surface of the galvanizing 2.5 MISCELLANEOUS MATERIALS bath is not acceptable. Provide hot-dip galvanized coating for those items indicated or specified to be galvanized, as follows: ASTM A153 for Galvanizing Iron And Steel Hardware.

> 2. ASTM A123 for Galvanizing Both Fabricated And Unfabricated Iron And Steel Products Made Of Uncoated Rolled, Pressed, And Forged Shapes, Plates, Bars, And Strip 0.0299 Inch Thick And 3. ASTM A384 for Standard Practice for Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing of Steel Assemblies. 4. ASTM A385 for Standard Practice for Providing High Quality Zinc Coatings (Hot-dip).

5. ASTM A386 for Galvanizing Assembled Steel Products. C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface-preparation specifications and environmental exposure conditions of installed metal fabrications 1. Exteriors (SSPC Zone 1B): SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

Interiors (SSPC Zone 1A): SSPC-SP 3, "Power Tool Cleaning." Apply shop primer to uncoated surfaces of metal fabrications, except those with galvanized finishes and those to be embedded in concrete, sprayed-on fireproofing, or masonry, unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1," for shop painting. 1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

A. Galvanized Surfaces: Clean abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION **SECTION 06 1000** ROUGH CARPENTRY PART 1 - GENERAL B. Cut masonry units with motor-driven saws to provide clean, sharp, unchipped edges. Cut units as required 1.1 GENERAL PROVISIONS

Attention is directed to the General And Supplemental Conditions of the Contract and all Sections within

Division 1 - General Requirements which are hereby made a part of this Section of the Specifications. SUMMARY A. Section Includes: Wood blocking and nailers. PART 2 - PRODUCTS

3.1 ADJUSTING AND CLEANING

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. 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.

Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by sealant movement capability 1. Do not leave gaps between ends of sealant backings.

Completely fill recesses in each joint configuration

2. Do not stretch, twist, puncture, or tear sealant backings. A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15

Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials D. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and

E. Install sealants using proven techniques that comply with the following and at the same time backings are

Place sealants so they directly contact and fully wet joint substrates.

3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability 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.

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 F. Backer Sheet: Provide plastic-laminate backer sheet, Grade BKL, on underside of window stool substrate. 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 B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work indistinguishable from original work. JOINT-SEALANT SCHEDULE A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication A. Joint-Sealant Application: Exterior joints in vertical surfaces and horizontal nontraffic surfaces; JS-1.

a. Perimeter joints between materials listed above and frames of doors, windows, and louvers. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in 2. Urethane Joint Sealant: Single component, nonsag, Class 25.

3. Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and B. Joint-Sealant Application: Interior joints in vertical surfaces and horizontal nontraffic surfaces; JS-2. Perimeter joints between interior wall surfaces and frames of interior doors and windows.

 b. Other joints as indicated. Joint Sealant: Latex, acrylic based

Joint-Sealant Color: As selected by Architect from manufacturer's full range of colors. A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects: END OF SECTION where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.

**SECTION 08 5113** METAL WINDOWS PART 1 - GENERAL 1.1 GENERAL PROVISIONS

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

DESCRIPTION OF WORK A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, ncluding but not limited to the following:

 Aluminum-framed windows of the following types a. Projected windows. b. Fixed windows.

Factory glazing of windows 1.3 PERFORMANCE REQUIREMENTS A. Test Units

1. Air, water, and structural test unit shall conform to requirements set forth in NAFS-1 and

manufacturer's standard locking/operating hardware and insulated glazing confirmation. 2. Thermal test unit sizes shall be 48" (1219 mm) x 72" (1828 mm). Unit shall consist of a fixed over

project-out window. B. Test Procedures and Performances 1. Windows shall conform to all NAFS-1 requirements for the window type referenced in 1.01.B. In

addition, the following specific performance requirements shall be met. Air Infiltration Test a. With ventilators closed and locked, test unit in accordance with ASTM E 283 at a static air pressure difference of 6.24 psf (299 Pa).

b. Air infiltration shall not exceed .10 cfm/SF (.50 l/sm²) of unit. Water Resistance Test a. With ventilators closed and locked, test unit in accordance with ASTM E 331/ASTM E 547 at a

static air pressure difference of 15.0 psf (718 Pa).

b. There shall be no uncontrolled water leakage. Uniform Load Deflection Test a. With ventilators closed and locked, test unit in accordance with ASTM E 330 at a static air

pressure difference of 100.0 psf (4788 Pa), positive and negative pressure. b. No member shall deflect over L/175 of its span. Uniform Load Structural Test

a. With ventilators closed and locked, test unit in accordance with ASTM E 330 at a static air pressure difference of 150.0 psf (7128 Pa), both positive and negative. b. At conclusion of test there shall be no glass breakage, permanent damage to fasteners, hardware parts, support arms or actuating mechanisms, nor any other damage that would

cause the window to be inoperable. Forced Entry Resistance a. Windows shall be tested in accordance to ASTM F 588 or AAMA 1302.5 and meet the requirements of performance level 10.

7. Condensation Resistance Test (CRF) With ventilators closed and locked, test unit in accordance with AAMA 1503.1. b. Condensation Resistance Factor (CRF) shall not be less than 52 (frame) and 51 (glass) when

glazed with 1" (25 mm) insulated - 1/4" (6 mm) clear, 1/2" (12 mm) air, 1/4" (6 mm) clear glass. 8. Temperature Change (Range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C) material 9. Thermal Transmittance Test (Conductive U-Value) a. With ventilators closed and locked, test unit in accordance with AAMA 1503.1.

b. Conductive thermal transmittance (U-Value) shall not be more than 0.66 BTU/hrft2°F (3.74 W/m<sup>2</sup>K) when glazed with 1" (25 mm) insulated - 1/4" (6 mm) clear, 1/2" (12 mm) air, 1/4" (6 mm) clear glass. 10. Thermal Transmittance Test (Conductie U-Value) a. With ventilators closed and locked, test unit in accordance with NFRC-102.

b. Conductive thermal transmittance (U-Value) shall not be more than 0.63 BTU/hrft2°F (3.57 W/m²K) when glazed with 1" (25 mm) insulated - 1/4" (6 mm) clear, 1/2" (12 mm) air, 1/4" (6 mm) clear 1.4 QUALITY ASSURANCE

A. Installer Qualifications: An installer acceptable to aluminum window manufacturer for installation of units required for this Project. B. Source Limitations: Obtain aluminum windows through one source from a single manufacturer. C. Glazing Publications: Comply with published recommendations of glass manufacturers and GANA's

"Glazing Manual" unless more stringent requirements are indicated. PROJECT CONDITIONS A. Field Measurements: Verify aluminum window openings by field measurements before fabrication and

indicate measurements on Shop Drawings. 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish opening dimensions and proceed with fabricating aluminum windows without field measurements. Coordinate wall construction to ensure that actual opening dimensions correspond

to established dimensions. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of 1.6 WARRANTY A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace aluminum windows that fail in materials or workmanship within specified warranty period. Failures

include, but are not limited to, the following: Failure to meet performance requirements.

Structural failures including excessive deflection. Water leakage, air infiltration, or condensation. Faulty operation of movable sash and hardware. 5. Deterioration of metals, metal finishes, and other materials beyond normal weathering.

Insulting glass failure.

B. Warranty Period: Two years from date of Substantial Completion C. Warranty Period for Metal Finishes: 10 years from date of Substantial Completion. D. Warranty Period for Glass: 10 years from date of Substantial Completion.

comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant PART 2 - PRODUCTS 2.1 MANUFACTURERS A. Basis-of-Design Products:

 EFCO® Series 3902 Thermal AP-HC100 Projected. B. Subject to compliance with requirements, provide products by one of the following or equal: 1. EFCO Corporation. Graham Architectural Products Corp.

3. Thermal Window Company, Tulsa, OK.

Winco Manufacturing Co.

AS NOTED Checked by PMW

architecture

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TOWN OF BARNSTABLE **Barnstable Public School** 835 Falmouth Road

Date	Issue / Revision
	Date

The contractor shall be responsible for the coordination of all field conditions, dimensions and componenets of the exisiting base building elements with the work as contained herein.

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Architect's Seal

**SPECIFICATIONS** 

Project no. 1002 7-26-10 Drawn by PMW

2.2	MATERIALS, GENERAL  A. Aluminum  1. Extracted aluminum shall be 6003 T6 allow and tompered.
	<ol> <li>Extruded aluminum shall be 6063-T6 alloy and tempered.</li> <li>Hardware</li> </ol>
	Locking handles shall be cam type and manufactured from a white bronze alloy with a US25D brushed finish.
	<ul> <li>2. Operating hardware shall be 4-bar stainless steel arms or equal.</li> <li>C. Weather-Strip</li> <li>1. All weather-strip shall be Santoprene® or equal.</li> </ul>
	<ul><li>D. Thermal Barrier</li><li>1. All exterior aluminum shall be separated from interior aluminum by a rigid, structural thermal barrier</li></ul>
	For purposes of this specification, a structural thermal barrier is defined as a system that shall transfer shear during bending and, therefore, promote composite action between the exterior and interior extrusions.
	<ol> <li>No thermal short circuits shall occur between the exterior and interior.</li> <li>Barrier material shall be poured-in-place, two-part polyurethane. A nonstructural thermal barrier is</li> </ol>
	unacceptable.  E. Fasteners: Aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by manufacturer to be noncorrosive and compatible with aluminum window members, trim, hardware,
	anchors, and other components. Cadmium-plated steel fasteners are not permitted.  F. Reinforcement: Where fasteners screw-anchor into aluminum less than 0.125 inch (3.2-mm) thick,
	reinforce interior with aluminum or nonmagnetic stainless steel to receive screw threads, or provide standard, noncorrosive, pressed-in, splined grommet nuts.
	G. Exposed Fasteners: Unless unavoidable for applying hardware, do not use exposed fasteners. For application of hardware, use fasteners that match finish of member or hardware being fastened, as appropriate
	H. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand
	<ul> <li>design pressure indicated. Cadmium-plated steel anchors, clips, and accessories are not permitted.</li> <li>Reinforcing Members: Aluminum, nonmagnetic stainless steel, nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with</li> </ul>
	ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated. Cadmium-plated steel reinforcing members are not permitted.
	<ul> <li>J. Replaceable Weather Seals: Comply with AAMA 701/702.</li> <li>K. Sealant: For sealants required within fabricated windows, provide window manufacturer's standard,</li> </ul>
2.3	permanently elastic, nonshrinking, and nonmigrating type recommended by sealant manufacturer for joint size and movement.  GLASS PRODUCTS AND MATERIALS
	<ul> <li>Float Glass: ASTM C 1036, Type I (transparent glass, flat), Quality q3 (glazing select); class as indicated.</li> </ul>
	<ul> <li>B. Heat-Treated Float Glass Fabrication Process: By horizontal (roller-hearth) process with roll-wave distortion parallel to bottom edge of glass as installed, unless otherwise indicated.</li> <li>C. Sputter-Coated Float Glass: Float glass with metallic-oxide or metallic-nitride coating deposited by</li> </ul>
	vacuum deposition process after manufacture and heat treatment (if any), complying with requirements specified for insulating glass units.
	INSULATING GLASS UNITS A. Classification of Units: Class CBA per ASTM E774.
	<ul> <li>B. Air Space Width: Nominal 1/2 inch measured perpendicularly from surfaces of glass lites at unit's edge.</li> <li>1. Interspace Content: Argon.</li> <li>C. Glass Specification: Comply with the following requirements:</li> </ul>
	Unit Thickness: 25.4 mm (1 inch nominal).     Thickness of Each Light: 6.0 mm (0.23 inch).
	<ol> <li>Uncoated Indoor Light: Float glass, ASTM C1036, Type 1, Class 1 (clear), Quality q3.</li> <li>Coated Outdoor Light: Heat-treated float glass, ASTM C 1048, Type I, Quality q3, Kind HS (heat</li> </ol>
	strengthened), Condition C (other coated glass), class as specified below:  a. Class of Glass: Class 1 (clear).  b. Low-Emissivity Coating: Sputter coat on second surface.
	<ul><li>5. Nominal Performance Characteristics:</li><li>a. Visible Light Transmittance: 47 percent.</li></ul>
	b. Solar Energy Transmittance: 27 percent. c. Summer Daytime U-Value: 0.32.
	<ul><li>d. Winter Nighttime U-Value: 0.31.</li><li>e. Shading Coefficient: 0.40.</li><li>f. Solar Heat Gain Coefficient (SHGC): 0.34.</li></ul>
	<ul><li>g. Outdoor Visible Reflectance: 11 percent.</li><li>D. Products: Subject to compliance with requirements, provide products by one of the following or</li></ul>
	<ul><li>approved equal:</li><li>1. Viracon, Inc., P.O. Box 990 800 Park Drive, Owatonna, MN 55060 (tel. 800-533-2080 or 507-451-9555.)</li></ul>
	<ol> <li>AFGD, Inc., 1600 Parkwood Circle, Suite 300, Atlanta, GA 30339 (tel. 800-766-2343 or 770-951-2343.)</li> </ol>
	<ol> <li>Interpane Glass Company, P.O. Box 408 520 East Railroad Street, Clinton, NC 28328 (tel. 800-334-1797 or 910-592-7101.)</li> </ol>
	FABRICATION  A. General  1. All aluminum frame and vent extrusions shall have a minimum wall thickness of .090" (2 mm).
	<ol> <li>Mechanical fasteners, welded components, and hardware items shall not bridge thermal barriers.         Thermal barriers shall align at all frame and vent corners.     </li> </ol>
	<ol> <li>Depth of frame shall not be less than 3 1/4" (82 mm).</li> <li>Depth of vent shall not be less than 2 7/16" (61 mm).</li> <li>Frame</li> </ol>
	Frame components shall be mechanically fastened.     Ventilator
	<ol> <li>All vent extrusions shall be tubular.</li> <li>Each corner shall be mitered, reinforced with an extruded corner key, hydraulically crimped, and</li> </ol>
	<ul><li>"cold welded" with epoxy adhesive.</li><li>3. Each vent shall be utilize two rows of weather stripping installed in specifically designed dovetail grooves in the extrusion. The exterior gasket will be omitted at the vent bottom rail for project-out</li></ul>
	vents and at the top rail for project-in vents, allowing air to pressure equalize the void between the vents and frame.
	D. Screens 1. Screen frames shall be extruded. 2. Consequence of the standard frame shall be forten drilled.
	<ol> <li>Screen mounting holes in the window frame shall be factory drilled.</li> <li>Screen mesh shall be aluminum or fiberglass.</li> <li>Glazing</li> </ol>
	<ol> <li>All units shall be glazed with the manufacturer's standard sealant process provided the glass is held in place by a removable, extruded aluminum, glazing bead. The glazing bead must be isolated from</li> </ol>
2.6	the glazing material by a gasket.  FINISHES  A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for
	recommendations for applying and designating finishes.  B. Finish designations prefixed by AA comply with the system established by the Aluminum Association for
	designating aluminum finishes.  C. High-Performance Organic Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: paid shows to finish a particular of the property of the
	Chemical Finish: acid-chromate-fluoride-phosphate conversion coating; Organic Coating: as specified below). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resing manufacturers' written instructions.
	<ol> <li>Fluoropolymer Two-Coat System: Manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not</li> </ol>
	<ul><li>less than 70 percent polyvinylidene fluoride resin by weight; complying with AAMA 2605.</li><li>Color and Gloss: Provide the following two colors where indicated.</li><li>a. Color: White to match existing.</li></ul>
	3 - EXECUTION EXAMINATION
	A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances; rough opening dimensions; levelness of sill
	plate; coordination with wall flashings, vapor retarders, and other built-in components; operational clearances; and other conditions affecting performance of work.  1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
	<ol><li>Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.</li></ol>
	B. Proceed with installation only after unsatisfactory conditions have been corrected.  INSTALLATION  A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other
	<ul> <li>A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components; Drawings; and Shop Drawings.</li> <li>B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement,</li> </ul>
	anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
	<ul> <li>C. Set sill members in bed of sealant or with gaskets, as indicated, for weathertight construction.</li> <li>D. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.</li> </ul>
	E. Metal Protection: Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials by complying with requirements specified in
0.0	"Dissimilar Materials" Paragraph in Appendix B in AAMA/NWWDA 101/I.S.2.

A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and

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PART 1 - GENERAL
063-T6 alloy and tempered.
                                                                                  finishes. Remove excess sealants, glazing materials, dirt, and other substances.
                                                                                                                                                                                            1.1 GENERAL PROVISIONS
                                                                             B. Clean factory-glazed glass immediately after installing windows. Comply with manufacturer's written
                                                                                  recommendations for final cleaning and maintenance. Remove nonpermanent labels and clean
                                                                                                                                                                                                   A. Attention is directed to the General And Supplemental Conditions of the Contract and all Sections within
                                                                                                                                                                                                        Division 1 - General Requirements which are hereby made a part of this Section of the Specifications.
type and manufactured from a white bronze alloy with a US25D
                                                                             C. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during
                                                                                                                                                                                                   A. Section includes surface preparation and the application of paint systems on interior substrates.
-bar stainless steel arms or equal.
                                                                                  construction period.
                                                                             D. The General Contracctor shall protect window surfaces from contact with contaminating substances
                                                                                                                                                                                              1.3 FIELD CONDITIONS
                                                                                                                                                                                                   A. Do not apply interior paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F
prene® or equal.
                                                                                   resulting from construction operations. In addition, monitor window surfaces adjacent to and below
                                                                                                                                                                                                       (3 deg C) above the dew point; or to damp or wet surfaces.
                                                                                  exterior concrete and masonry surfaces during construction for presence of dirt, scum, alkaline deposits,
                                                                                                                                                                                               PART 2 - PRODUCTS
separated from interior aluminum by a rigid, structural thermal barrier.
                                                                                  stains, or other contaminants. If contaminating substances do contact window surfaces, remove
                                                                                  contaminants immediately according to manufacturer's written recommendations.
                                                                                                                                                                                              2.1 MANUFACTURERS
on, a structural thermal barrier is defined as a system that shall
and, therefore, promote composite action between the exterior and END OF SECTION
                                                                                                                                                                                                   A. Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

    Benjamin Moore & Co.

                                                                        SECTION 09 2900
                                                                        GYPSUM BOARD
                                                                                                                                                                                                      PPG Architectural Finishes, Inc.
occur between the exterior and interior.
                                                                        PART 1 - GENERAL
                                                                                                                                                                                                     3. Sherwin-Williams Company (The).
d-in-place, two-part polyurethane. A nonstructural thermal barrier is
                                                                             GENERAL PROVISIONS
                                                                                                                                                                                               2.2 PAINT, GENERAL
                                                                                Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 - GENERAL
                                                                                                                                                                                                   A. Products: Subject to compliance with requirements, provide products listed in other Part 3 articles for the
c stainless steel, epoxy adhesive, or other materials warranted by
                                                                                REQUIREMENTS, which are hereby made a part of this Section of the Specifications.
 d compatible with aluminum window members, trim, hardware,
                                                                                                                                                                                                        paint category indicated.
                                                                       1.2 DESCRIPTION OF WORK
                                                                                                                                                                                                   B. Material Compatibility:
admium-plated steel fasteners are not permitted.
                                                                           A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited
                                                                                                                                                                                                          Provide materials for use within each paint system that are compatible with one another and
screw-anchor into aluminum less than 0.125 inch (3.2-mm) thick,
                                                                                to the following:

    Interior gypsum wallboard.

nonmagnetic stainless steel to receive screw threads, or provide
                                                                                                                                                                                                            substrates indicated, under conditions of service and application as demonstrated by manufacturer,
                                                                                   Non-load-bearing steel framing
splined grommet nuts.
                                                                                                                                                                                                            based on testing and field experience.
                                                                               PROJECT CONDITIONS
                                                                                                                                                                                                     2. For each coat in a paint system, provide products recommended in writing by manufacturers of
pidable for applying hardware, do not use exposed fasteners. For
                                                                                Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations,
ners that match finish of member or hardware being fastened, as
                                                                                                                                                                                                            topcoat for use in paint system and on substrate indicated.
                                                                                whichever are more stringent.
                                                                                                                                                                                                   C. Colors: To match existing or as selected by Owner's representative.
                                                                        PART 2 - PRODUCTS
                                                                                                                                                                                               PART 3 - EXECUTION
Numinum, nonmagnetic stainless steel, or zinc-coated steel or iron 2.1 MANUFACTURERS
                                                                       A. Subject to compliance with requirements, provide products by one of the following or equal:
 3 severe service conditions; provide sufficient strength to withstand
                                                                                                                                                                                             3.1 EXAMINATION

    Steel Framing and Furring:

m-plated steel anchors, clips, and accessories are not permitted.
                                                                                                                                                                                                   A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum
                                                                                     a. Dietrich Industries, Inc.
nonmagnetic stainless steel, nickel/chrome-plated steel complying
                                                                                                                                                                                                        moisture content and other conditions affecting performance of the Work.
                                                                                        MarinoWare; Division of Ware Ind.
vere service conditions, or zinc-coated steel or iron complying with
                                                                                                                                                                                                   B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
                                                                                     c. Unimast, Inc.
 e conditions; provide sufficient strength to withstand design pressure

    Gypsum Board: 12 percent.

                                                                                    Gypsum Board and Related Products
inforcing members are not permitted.
                                                                                                                                                                                                   C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

    G-P Gypsum Corp.

oly with AAMA 701/702.

    b. National Gypsum Company

                                                                                                                                                                                                   D. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and
in fabricated windows, provide window manufacturer's standard,

    c. United States Gypsum Co.

                                                                        2.2 STEEL PARTITION AND SOFFIT FRAMING
                                                                                                                                                                                                   E. Proceed with coating application only after unsatisfactory conditions have been corrected.
and nonmigrating type recommended by sealant manufacturer for
                                                                               Components, General: As follows:
                                                                                                                                                                                                      1. Application of coating indicates acceptance of surfaces and conditions.
                                                                                    Comply with ASTM C 754 for conditions indicated.
                                                                                                                                                                                                     PREPARATION
                                                                                  Steel Sheet Components: Complying with ASTM C 645 requirements for metal and with ASTM A 653/A 653M, G40
                                                                                                                                                                                                   A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to
 (transparent glass, flat), Quality q3 (glazing select); class as
                                                                                     (Z120), hot-dip galvanized zinc coating.
                                                                                Steel Studs and Runners: ASTM C 645
                                                                                                                                                                                                        substrates indicated.
                                                                                  Minimum Base Metal Thickness: 0.0312 inch (0.79-mm).
 n Process: By horizontal (roller-hearth) process with roll-wave
                                                                                                                                                                                                   B. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and
                                                                                  Depth: As indicated.
f glass as installed, unless otherwise indicated.
                                                                                                                                                                                                        incompatible paints and encapsulants.
                                                                          C. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten
glass with metallic-oxide or metallic-nitride coating deposited by
                                                                                                                                                                                                       1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as
                                                                                steel members to substrates.
anufacture and heat treatment (if any), complying with requirements

2.3 INTERIOR GYPSUM WALLBOARD
                                                                                                                                                                                                            required to produce paint systems indicated.
                                                                          A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support 3.3
                                                                                                                                                                                                     APPLICATION
                                                                                                                                                                                                   A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
                                                                         B. Gypsum Wallboard: ASTM C 36.
per ASTM E774.
                                                                                                                                                                                                      1. Use applicators and techniques suited for paint and substrate indicated.

    Regular Type:

measured perpendicularly from surfaces of glass lites at unit's edge.
                                                                                                                                                                                                   B. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform
                                                                                       Thickness: As indicated
                                                                                                                                                                                                        paint finish, color, and appearance.
                                                                                    b. Long Edges: Tapered.
 e following requirements:
                                                                                                                                                                                                   C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller

 c. Location: As indicated.

                                                                                                                                                                                                        tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
ch nominal).
                                                                        2.4 TRIM ACCESSORIES
mm (0.23 inch).
                                                                                                                                                                                               3.4 CLEANING AND PROTECTION

 A. Interior Trim: ASTM C 1047.

glass, ASTM C1036, Type 1, Class 1 (clear), Quality q3.
                                                                                   Material: Galvanized or aluminum-coated steel sheet or rolled zinc.
                                                                                                                                                                                                   A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
eated float glass, ASTM C 1048, Type I, Quality q3, Kind HS (heat
                                                                             Shapes:
                                                                                                                                                                                                   B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing,

 a. Cornerbead: Use at outside corners.

ner coated glass), class as specified below:
                                                                                                                                                                                                        scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
                                                                          B. Aluminum Trim: Extruded accessories of profiles and dimensions indicated including, but not limited to 5/8 inch wide reveal
                                                                                                                                                                                                   C. Protect work of other trades against damage from paint application. Correct damage to work of other
outter coat on second surface.
                                                                                                                                                                                                        trades by cleaning, repairing, replacing, and refinishing, and leave in an undamaged condition.

    Manufacturers: Subject to compliance with requirements, provide products by one of the following or equal:

                                                                                                                                                                                               3.5 INTERIOR PAINTING SCHEDULE
eristics:

 a. Fry Reglet Corp.

: 47 percent.
                                                                                                                                                                                                   A. Gypsum Board Wall Substrates:

 c. MM Systems Corporation.

: 27 percent.

    Latex System:

 d. Pittcon Industries.

    a. Prime Coat: Primer sealer, latex, interior.

                                                                              2. Aluminum: Alloy and temper with not less than the strength and durability properties of ASTM B 221 (ASTM B 221M),
                                                                                                                                                                                                                  1) Moore; Eco Spec, Interior Latex Primer Sealer, W231.
                                                                                                                                                                                                                  2) PPG; Speedhide, Interior Latex Primer Sealer, 6-2.
                                                                              3. Finish: Corrosion-resistant primer compatible with joint compound and finish materials specified.
(SHGC): 0.34.
                                                                                                                                                                                                                  3) S-W; ProGreen 200, Low VOC Interior Latex Primer, B28W00600.
                                                                       2.5 JOINT TREATMENT MATERIALS

 Intermediate Coat: Latex, interior, matching topcoat.

 11 percent.
                                                                            A. Comply with ASTM C 475.
 h requirements, provide products by one of the following or
                                                                                                                                                                                                           c. Topcoat: Latex, interior, semi-gloss, (Gloss Level 5).
                                                                         B. Joint Tape:

    Interior Gypsum Wallboard: Paper.

                                                                                                                                                                                                                   ) Moore; Regal, , Premium 100% Acrylic Semi-Gloss Finish, B333-01.
                                                                               Tile Backing Panels: As recommended by panel manufacturer.
 D Park Drive, Owatonna, MN 55060 (tel. 800-533-2080 or
                                                                                                                                                                                                                  2) PPG; Pittsburgh Paints, Speedhide Interior Semi-Gloss Acrylic Latex, 6-500.
                                                                            C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied
                                                                                                                                                                                                                  3) S-W; ProGreen 200, Interior Latex Semi-Gloss, B31W00651/B31WQ8651.
                                                                                on previous or for successive coats.
ircle, Suite 300, Atlanta, GA 30339 (tel. 800-766-2343 or
                                                                                                                                                                                              END OF SECTION
                                                                                1. Prefilling: At open joints and damaged surface areas, use setting-type taping compound.
                                                                              2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use setting-type
D. Box 408 520 East Railroad Street, Clinton, NC 28328 (tel.
                                                                                     taping compound.
                                                                                    a. Use setting-type compound for installing paper-faced metal trim accessories.
                                                                                3. Fill Coat: For second coat, use setting-type, sandable topping compound
                                                                                  Finish Coat: For third coat, use setting-type, sandable topping compound.
                                                                       2.6 AUXILIARY MATERIALS
 trusions shall have a minimum wall thickness of .090" (2 mm).
                                                                         A. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.
 omponents, and hardware items shall not bridge thermal barriers.
                                                                        B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
 I frame and vent corners.
                                                                                  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)
ss than 3 1/4" (82 mm).
                                                                        PART 3 - EXECUTION
than 2 7/16" (61 mm).
                                                                       3.1 EXAMINATION
                                                                         A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural
 chanically fastened.
                                                                                framing, for compliance with requirements and other conditions affecting performance. Proceed with installation only after
                                                                                unsatisfactory conditions have been corrected.
                                                                       3.2 INSTALLING STEEL FRAMING, GENERAL
reinforced with an extruded corner key, hydraulically crimped, and
                                                                          A. Installation Standards: ASTM C 754, and ASTM C 840 requirements that apply to framing installation.
                                                                           B. Do not bridge building control and expansion joints with steel framing or furring members. Frame both sides of joints
rows of weather stripping installed in specifically designed dovetail
                                                                               INSTALLING STEEL PARTITION AND SOFFIT FRAMING
exterior gasket will be omitted at the vent bottom rail for project-out
                                                                           A. Install tracks (runners) at floors, ceilings, and structural walls and columns where gypsum board assemblies abut other
eject-in vents, allowing air to pressure equalize the void between the
                                                                                  . Where studs are installed directly against exterior walls, install asphalt-felt or foam-gasket isolation strip between studs
                                                                          B. Install steel studs and furring at the following spacings:
                                                                                  . Single-Layer Construction: 16 inches (406-mm) o.c., unless otherwise indicated.
vindow frame shall be factory drilled.
                                                                           C. Install steel studs so flanges point in the same direction and leading edge or end of each panel can be attached to open
m or fiberglass.
                                                                                (unsupported) edges of stud flanges first.
                                                                             APPLYING AND FINISHING PANELS, GENERAL
e manufacturer's standard sealant process provided the glass is held

A. Gypsum Board Application and Finishing Standards: ASTM C 840 and GA-216.
ded aluminum, glazing bead. The glazing bead must be isolated from B. Install gypsum 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
shes Manual for Architectural and Metal Products" for
                                                                                opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
                                                                            D. Attach gypsum panels to steel studs so leading edge or end of each panel is attached to open (unsupported) edges of stud
comply with the system established by the Aluminum Association for
                                                                             Attach gypsum panels to framing provided at openings and cutouts.
AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals;
                                                                             Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's
                                                                                written recommendations.
oride-phosphate conversion coating; Organic Coating: as specified
                                                                                  Space screws a maximum of 12 inches (304.8-mm) o.c. for vertical applications.
y coating to exposed metal surfaces to comply with coating and resin
                                                                                Space fasteners in panels that are tile substrates a maximum of 8 inches (203.2-mm) o.c.
                                                                             PANEL APPLICATION METHODS
m: Manufacturer's standard two-coat, thermocured system
                                                                          A. Single-Layer Application:
 d inhibitive primer and fluoropolymer color topcoat containing not
                                                                             1. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated or required by
dene fluoride resin by weight; complying with AAMA 2605.
                                                                                     fire-resistance-rated assembly, and minimize end joints.
ollowing two colors where indicated.
                                                                                    a. Stagger abutting end joints not less than one framing member in alternate courses of board.
                                                                         B. Single-Layer Fastening Methods: Apply gypsum panels to supports with steel drill screws.
                                                                       3.6 INSTALLING TRIM ACCESSORIES
                                                                         A. 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.
ctural support, anchorage, and conditions, with Installer present, for
                                                                             FINISHING GYPSUM BOARD ASSEMBLIES
stallation tolerances; rough opening dimensions; levelness of sill
                                                                         A. Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere
 s, vapor retarders, and other built-in components; operational
                                                                                as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
                                                                            B. Prefill open joints and damaged surface areas.
ffecting performance of work.
                                                                                Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.
and free of excess mortar, sand, and other construction debris.
                                                                                Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:
e of grease, oil, dirt, rust, corrosion, and welding slag; without sharp
                                                                                  Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at
                                                                                     panel surfaces that will be exposed to view, unless otherwise indicated.
 insatisfactory conditions have been corrected.
                                                                        END OF SECTION
instructions for installing windows, hardware, accessories, and other
re, true to line, without distortion or impeding thermal movement,
```

3.4 PROTECTION AND CLEANING

A. Clean aluminum surfaces immediately after installing windows. Avoid damaging protective coatings and PAINTING

SECTION 09 2900

architecture

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> WINDOWS
>
> n School
> Street High stable S 744 Barn L

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TOWN OF BARNSTABLE **Barnstable Public School** 835 Falmouth Road

Issue / Revision

The contractor shall be responsible for the coordination of all field conditions, dimensions and componenets of the exisiting base building elements with the work as contained herein.

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Architect's Seal

PMW

**SPECIFICATIONS** 

Project no. 1002 AS NOTED 7-26-10 Drawn by PMW Checked by