

**SECTION 01020
UNIT PRICES**

PART 1: ALLOWANCES

Bidders shall provide for unit prices as follows:

Remove and replace damaged window frame: Price per LF \$ _____

Remove and replace window sill Price Each \$ _____

END OF SECTION

**SECTION 01630
SUBSTITUTIONS**

PART 1: GENERAL:

1.01 DEFINITION

- A. Substitutions shall include materials and products not specified herein or stated as an approved equal.

1.02 REQUIREMENTS

- A. After award of the contract, substitutions will be considered providing the Contractor can verify that one of the following circumstances exists:

- 1. The specified material is unavailable for reasons beyond the control of the Contractor. Such reasons consist of strikes, bankruptcy, discontinuance of manufacture, or acts of God.

OR

- 2. The Contractor placed or attempted to place, orders for the specified material within 30 days of the date of the signing of the contract and has been unable to obtain delivery in a timely manner.

OR

- 3. Contractor submits sufficient data under providing complete analysis of the proposed substitution by documenting compliance with standard of required function, dimension, appearance, and quality described herein these documents and the Owner accepts the substitution proposal.

1.03 ADJUSTMENT TO CONTRACT AMOUNT

- A. An increase in the contract amount will not be acceptable if the order for material was not placed within thirty (30) days of executing the contract and the material was available within a thirty (30) day period.
- B. Cost adjustments shall be equitable under the circumstances causing the change and acceptable to the Owner in all respects. They shall apply only to materials or products proposed with the request for substitution.
- C. Cost adjustments will not be considered unless the Contractor can substantiate one of the conditions stated above in paragraph 1.02.A or 1.02.B.

1.04 QUALITY ASSURANCE

- A. Contractor's Representation: A request for substitution constitutes a representation that the Contractor:
1. Has investigated the proposed product and determined that it is equal to or superior in all respects to that specified.
 2. Will provide the same warranties or bonds for the substitution as for the product specified.
 3. Will coordinate the installation of an accepted substitution into the work, and make such other changes as may be required to make the work complete in all respects.
 4. Waives all claims for additional costs, under this responsibility, which may subsequently become apparent.

PART 2: SUBMITTALS**2.01 REQUESTS FOR SUBSTITUTIONS**

- A. Requests for substitutions that apply under the circumstances stated above in paragraph 1.02.A or 1.02.B shall comply with the following requirements.
1. Submittal shall fully identify products or methods being replaced by substitution, including related specification section and drawing number(s), and fully documented to show compliance with requirements for substitutions.
 2. Submit a separate request for each product, supported with complete data, with drawings and samples as appropriate addressing the following:
 - (a) Reason for request for substitution.
 - (b) Comparison of the qualities of the proposed substitution with the specified.
 - (c) Changes required in other elements of the work because of the substitution.
 - (d) Effect on the construction schedule.
 - (e) Cost data comparing the proposed substitution with the product specified.

- (f) Availability of maintenance service, and source of replacement materials.
- (g) All test data where applicable.

PART 3: EXECUTION

3.01 REVIEW

- A. The Architect will review requests for substitution and notify the Contractor within fifteen (15) days in a written recommendation to the Owner of the decision to accept or reject the requested substitution.

END OF SECTION

**SECTION 01732
SELECTIVE DEMOLITION**

PART 1: GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Demolition and removal of selected portions of building or structure.

1.02 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.03 SUBMITTALS

- A. Predemolition Photographs: Show existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations.

1.04 QUALITY ASSURANCE

- A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.

1.05 PROJECT CONDITIONS

- A. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
 - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Owner will remove hazardous materials under a separate contract.
- C. Storage or sale of removed items or materials on-site is not permitted.

1.06 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2: PRODUCTS (Not Used)

PART 3: EXECUTION

3.01 EXAMINATION

- A. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- B. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.
- C. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

3.02 PREPARATION

- A. Site Access: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

3.03 SELECTIVE DEMOLITION

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
 - 3. Do not use cutting torches.
 - 4. Dispose of demolished items and materials promptly.
- B. Do not demolish building elements beyond what is indicated on Drawings without Architect's approval.
- C. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. .

3.04 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
- B. Burning: Do not burn demolished materials.
- C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

3.05 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION

**SECTION 06100
ROUGH CARPENTRY**

PART 1: GENERAL

1.01 DESCRIPTION

- A. This Section includes the requirements for furnishing and installation of wood blocking, plywood and miscellaneous lumber.

1.02 REFERENCES AND STANDARDS

- A. The Virginia Uniform Statewide Building Code shall be the basis for minimum requirement not otherwise specified. Additional reference includes the following:
 - 1. AWPA C1 (American Wood Preserver's Association) 1990, all timber products – pressure treatment.

1.03 PRODUCT HANDLING:

- A. Carefully pile lumber off the ground in a manner to insure proper drainage, ventilation, and protection from weather. Store plywood and other materials under cover.

1.04 MISCELLANEOUS ITEMS:

- A. Rough carpentry work and miscellaneous items and their related components which are to be furnished and/or installed under this section are not necessarily individually described. Rough carpentry work and miscellaneous items not mentioned or described shall be furnished and/or installed in accordance with the intent of the drawings and specifications and as required to complete the work.

PART 2: PRODUCTS

2.01 MATERIALS

- A. Framing Lumber:
 - 1. Blocking, miscellaneous lumber: Construction grade Douglas Fir or construction grade Southern Pine.
 - 2. Species graded under other nationally recognized grading rules, which are equivalent to grades listed, may be substituted. The Architect shall be notified in writing of the species and grades to be used.
 - 3. Grade mark shall be stamped at the mill. Moisture content shall not

exceed 15 percent.

- B. Wood Treatment by Pressure Process: Where lumber or plywood is indicated as "treated", or is specified herein to be treated, comply with applicable requirements of AWWA Standards C2 (Lumber) and C9 (Plywood) and of AWPB Standards listed below. Mark each treated item with the AWWA Quality Mark Requirements.
 - 1. Pressure treat aboveground items with water-borne preservative to comply with AWPB LP-2. After treatment, kiln-dry lumber and plywood to a maximum moisture content, respectively, of 19% and 15%. Treat indicated items and the following:
 - (a) Wood cants, nailers, curbs, blocking, stripping and similar members in connection with roofing, flashing and waterproofing.
 - 2. Complete fabrication of treated items prior to treatment, where possible. If cut after treatment, coat cut surfaces with heavy brush coat of same chemical used for treatment and to comply with AWWA M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.
- C. Plywood Sheathing: All plywood sheathing shall be group 1 species meeting the requirements of U.S. Product Standard PS 1, of the thicknesses shown on the drawings. If thickness is not shown use 5/8 inch. Each panel shall carry the grade trademark of the American Plywood Association. All roof, floor, and wall sheathing shall be grade-marked C-D plugged ext APA.

PART 3: EXECUTION

3.01 LAYING OUT WORK

- A. Before commencing work, check all lines and levels indicated and such other work as has been completed. In event of failure to do so, Contractor shall be responsible for correction of any errors.

3.02 CONSTRUCTION AND WORKMANSHIP

- A. General: Install all wood framing, making proper provisions for work of other trades. Do all cutting of wood required to accommodate plumbing, heating and ventilating, electrical, and other trades. Fit neatly around all exposed items, such as outlet boxes, conduit, pipes, and ducts.
- B. Plywood Sheathing: Install plywood with long dimension perpendicular to supports. Sheathing shall have solid bearing under all edges. All nails securing plywood to framing shall be barbed plywood nails one-half the length of a common nail plus plywood thickness.

3.03 LUMBER FASTENINGS

- A. Minimum Requirements: Nailing and bolting of wood members shall conform to the minimum requirements of the Statewide Building Code.
- B. Nailing and Connectors: Installation shall be in accordance with the manufacturer's published instructions. Nails shall be untreated steel for interior work and concealed framing and hot dipped galvanized for all exposed work on exterior and all treated wood. Nails shall be barbed plywood nails for all plywood sheathing. Unless connectors are detailed or steel connectors indicated, nails shall not be driven closer together than 1/2 of their length, nor closer to the edge of a member than 1/4 their length. When wood tends to split with size of nail used, predrill holes for nails. Penetration of nails or spikes into pieces shall be not less than one-half the length of the nail or spike.
- C. Washers: Provide all bolts and lag screws bearing on wood with malleable iron washers of sizes required under heads and nuts, except that cut washers shall be used where shown on the structural drawings.

3.04 ROUGH HARDWARE

- A. Furnish and install all stock items of rough hardware as indicated or required, including clips, anchors, hangers, bolts, ties, and plates for connecting wood framing members to wood, concrete, masonry, or steel, except as specified to be provided under other sections.
- B. Expansion bolts shall be carefully located in order to eliminate the risk of damage to concrete, steel reinforcement, and other embedded items. Expansion bolts shall not be used except where first approved by the Architect in writing.

END OF SECTION

**SECTION 06600
PLASTIC FABRICATIONS**

PART 1: GENERAL

1.01 SECTION INCLUDES

- A. Cellular pvc trim boards and brick mold.

1.02 REFERENCES

- A. A. ASTM D792 - Density and Specific Gravity of Plastics by Displacement.
- B. B. ASTM D570 - Water Absorption of Plastics.
- C. C. ASTM D638 - Tensile Properties of Plastics.
- D. D. ASTM D790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating
- E. Materials.
- F. E. ASTM D1761 - Mechanical Fasteners in Wood.
- G. F. ASTM D5420 - Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by means of a
- H. Striker Impacted by a Falling Weight.
- I. ASTM D256 - Determining the Pendulum Impact Resistance of Plastics.
- J. ASTM D696 - Coefficient of Linear Thermal Expansion of Plastics Between -30.C and 30.C with a
- K. Vitreous silica Dilatometer.
- L. ASTM D635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.
- M. ASTM E84 - Surface Burning Characteristics of Building Materials.
- N. ASTM D648 - Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position.
- O. ASTM D3679 - Standard Specification for Rigid Poly Vinyl Chloride (PVC) Siding.

1.03 QUALITY ASSURANCE

- A. Regulatory Requirements: Check with Local Building Code for installation requirements.
- B. Allowable Tolerances:
 - 1. Variation in component length: -0.00 / +1.00"
 - 2. Variation in component width: $\pm 1/16$ "
 - 3. Variation in component thickness: $\pm 1/16$ "
 - 4. Variation in component edge cut: ± 2 .
 - 5. Variation in Density -0% + 10%
- C. Workmanship, Finish, and Appearance:
 - 1. Free foam cellular pvc that is homogeneous and free of voids, holes, cracks, and foreign inclusions and other defects. Edges must be square, and top and bottom surfaces shall be flat with no convex or concave deviation.
 - 2. Uniform surface free from cupping, warping, and twisting.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Trim materials should be stored on a flat and level surface on a full shipping pallet. Handle materials
- B. to prevent damage to product edges and corners. Store materials under a protective covering to
- C. prevent jobsite dirt and residue from collecting on the boards.

1.05 WARRANTY

- A. Provide manufacturer's 25 year warranty against defects in manufacturing that cause the products to rot, corrode, delaminate, or excessively swell from moisture.

PART 2: PRODUCTS

2.01 2.01 MATERIALS

- A. Acceptable products: AZEK® Trimboards manufactured by Vycom Corporation (801 Corey Street, Moosic, PA 18507) or approved equal.
- B. Material: Free foam cellular pvc material with a small-cell microstructure and density of .55 grams/cm³.

2.02 2.02 ACCESSORY PRODUCTS

- A. A. Fasteners:
 - 1. Use fasteners designed for wood trim and wood siding (thinner shank, blunt point, full round head).
 - 2. Use a highly durable fastener such as stainless steel or hot-dipped galvanized.
 - 3. Staples, small brads and wire nails must not be used as fastening members.
 - 4. The fasteners should be long enough to penetrate the solid wood substrate a minimum of 1 1/2".
 - 5. Use 2 fasteners per every framing member for trimboards applications.
 - 6. Fasteners must be installed no more than 2" from the end of each board.
- B. B. Adhesives:
 - 1. Glue all joints with cellular pvc cement, to prevent joint separation. The glue joint should be secured with a fastener and/or fastened on each side of the joint to allow adequate bonding time.
 - 2. Surfaces to be glued should be smooth, clean and in complete contact with each other.
- C. C. Sealants:
 - 1. Use urethane, polyurethane or acrylic based sealants without silicone.

2.03 2.03 FINISHES

A. Preparation:

1. Surface must be clean and dry.
2. Fill nail holes with polyurethane or acrylic based caulk.
3. Use a 100% acrylic latex paint with a Light Reflective Value (LRV) of 55 or higher.
4. Follow the paint manufacturer's recommendations to apply.

PART 3: EXECUTION

3.01 INSTALLATION

A. Manufacturers instructions:

1. Comply with manufacturer's product catalog installation instructions and product technical bulletin instructions.

END OF SECTION

**SECTION 07920
SEALANTS**

PART 1: GENERAL:

1.01 DESCRIPTION

- A. This Section specifies the furnishing and application of sealants.

1.02 QUALITY ASSURANCE

- A. Application of all sealants shall be executed by laborers employed by a firm normally in the business of applying sealants specified herein.
- B. Products shall comply to the following standards:
 - 1. Latex Sealants - ASTM C834 (1991).
 - 2. Elastomeric Joint Sealants - ASTM C920 (1987).

1.03 SUBMITTALS:

- A. Submit manufacturer's product literature and standard color chart.

1.04 DELIVERY, STORAGE AND HANDLING:

- A. All products shall be delivered to the project site in manufacturer's unopened containers with material designations and shelf life clearly marked thereon. Follow manufacturer's recommendations for storage temperatures and shelf life.

PART 2: PRODUCTS

2.01 INTERIOR SEALANT

- A. Interior sealant shall be latex and conform to ASTM C834, Type S or M, Grade NS, Class 12.5, Use NT in locations listed below. Where movement is anticipated to be between 25% and 50% sealant shall conform to ASTM C920.
- B. Perimeter of frames which adjoin concrete or masonry.
- C. Joints of interior masonry walls adjoining columns, pilaster or concrete walls.
- D. Not otherwise indicated, where small voids exist between materials to be painted.

2.02 EXTERIOR SEALANT

- A. Exterior sealant for joints in vertical surfaces shall be polyurethane and conform to ASTM C920, Type S or M, grade NS, Class 25, Use NT. Joints in horizontal surface shall receive sealant conforming to ASTM C920, Type S or M, Grade P, Class 25, Use T. Locations listed below are applicable.
- B. Joints and recesses formed where frames of windows, doors, louvers, and vents adjoin masonry, concrete or metal frames.

2.03 PRIMERS

- A. Shall be as manufactured and recommended for each substrate by approved manufacturer of each sealant material used.

2.04 BOND BREAKERS AND BACKSTOPS

- A. Bond breakers and backstops shall be as recommended by sealant manufacturer for the application.

2.05 MANUFACTURERS

- A. The products furnished shall be the best quality products. Dow Corning type 888, sarnafill, flameseal (Grace Construction Products) or equal.

PART 3: EXECUTION

3.01 ENVIRONMENTAL CONDITIONS

- A. Schedule sealing operations so that working joints are most likely to be normal size. Apply materials within manufacturer's recommended surface and ambient temperature ranges.

3.02 PREPARATION

- A. Surfaces shall be clean, dry and free from loose material, dirt, oil or foreign matter that would impair adhesion. For existing joints, remove old caulk or sealant.
- B. Steel Surfaces: Remove loose mill scale by scraping and wire brushing.
- C. Aluminum Surfaces: Remove protective coatings from surfaces that will be in contact with sealant. When masking tape is used as protective coating, remove tape and residual adhesive just before sealant application. Use nonstaining solvents recommended by manufacturer of aluminum item.

3.03 INSTALLATION

- A. Unless otherwise required by these specifications, install materials in strict accordance with manufacturer's specifications and recommendations using approved equipment.
- B. Backstops: Pack back or bottom of joint cavities with backstop material to provide joint of acceptable depth.
- C. Primer: Where recommended by sealant manufacturer, apply primer in accordance with sealant manufacturer's instructions.
- D. Bond Breaker: Install bond breakers to back or bottom of joint cavities, as recommended by sealant manufacturer for sealant used, to prevent sealant from adhering to these surfaces. Avoid contamination of adjoining surfaces.
- E. Sealants: Provide sealant compatible with material to which it is applied. Do not use sealant that has exceeded shelf life or has jelled and cannot be discharged in continuous flow from gun. Follow manufacturer's directions, forcing sealant into joints to fill solidly without air pockets. Tool after application to ensure adhesion. Sealant shall be uniformly smooth and free of wrinkles.
- F. Protection: Protect areas adjacent to joints from sealant smears. Masking tape may be used where practical for this purpose if removed immediately after sealing.

3.04 PATCHING

- A. Patch or replace defective or damaged sealants as directed by the Architect.

3.05 CLEANING

- A. Clean adjacent surfaces soiled by sealing operations. Follow manufacturer's recommendations for cleaning procedures using agents that are not potentially dangerous to glass and metal surfaces due to wash-off by rain.

END OF SECTION

**SECTION 08511
ALUMINUM WINDOWS**

PART 1: GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Material: aluminum windows as on the drawings and specified in this section.
 - 2. Installation: labor, tools, and material needed to install aluminum windows.
 - 3. Glass and glazing.

1.02 RELATED SECTIONS - Section 07920 –Sealants

1.03 SYSTEM DESCRIPTION

- A. AAMA Designation: AW-PG80-FW.
- B. Windows: 3-1/4" frame depth; extruded aluminum with integral structural thermal break made with glass-reinforced nylon strips installed by the window manufacturer in the frame members; equal-leg frame; exterior and interior finishes applied by the window manufacturer; frames assembled by the window manufacturer.
- C. Configuration: fixed
- D. Glazing: exterior aluminum glazing bead; exterior open-cell foam encased in black thermoplastic elastomer (TPE) for UV stability; 1" insulating glass; interior 2-part structural silicone; glass description in paragraph 2.04; glazed by the window manufacturer.

1.04 PERFORMANCE REQUIREMENTS

- A. Conformance to AW-PG80-FW specifications in AAMA/WDMA/CSA 101/I.S.2/A440-08 when tests are performed on the prescribed 60" x 99" minimum test size with the following test results:

1. Air Infiltration: meet AAMA 101 standard of maximum .1 cfm/sq ft of area when tested per ASTM E 283-04 at a static air pressure difference of 6.2 psf.
 2. Water Penetration: no uncontrolled water leakage when tested per ASTM E 331-00 and ASTM E 547-00 at a static air pressure difference of 15 psf.
 3. Uniform Deflection: no more than L/175 when tested per ASTM E 330-02 at a static air pressure difference of 80 psf.
 4. Uniform Structural Load: no glass breakage or permanent damage to fasteners, and maximum .2% permanent deformation of the span of any frame member when tested per ASTM E 330-02 at a static air pressure difference of 120 psf.
- B. U Value Simulation: thermal computer simulation per NFRC 100-04, at the prescribed 48" x 60" Non-Residential Size, glazed with 1" insulating glass made with 1/8" glass with a soft low E coating on the #2 surface of the exterior lite, thermoplastic butyl spacer, argon gas, and 1/8" clear interior glass lite: Thermal Transmittance to be maximum 0.34 BTU/HR/SQ.FT/°F PROJECT CONDITIONS

1.05 QUALITY ASSURANCE

- A. Submit for prebid approval ten days prior to bid opening a sample window representing the bid window except for color and valid test reports from an AAMA-accredited laboratory conforming to test results in Paragraph 1.07.
- B. Acceptance will be by addendum only as no verbal approvals will be allowed.
- C. Submit bid on prequalified products in prebid written addendum. Bidder must identify manufacturer and model of product on which the bid is based.
- D. Furnish a valid AAMA "Authorization for Product Certification" indicating that the windows for the project conform to AAMA/WDMA/CSA 101/I.S.2/A440-08.
- E. Furnish visible, permanent IGCC certification labels indicating compliance to ASTM E 2190-02 on insulating glass units.
- F. Manufacturer's warranties:
 1. Windows: warrant for one year against defects in material or workmanship under normal use.

2. Insulating glass units: warrant seal for five years visual obstruction from film formation or moisture collection between internal glass surfaces, excluding that caused by glass breakage or abuse.
3. Paint finish: PPG Duranar™ organic finish conforming to AAMA 2605-05: warrant for fifteen years against chipping, peeling, cracking, chalking, or fading.

1.06 DELIVERY, STORAGE, AND HANDLING - Handle and protect windows and accessories in accordance with AAMA CW-10-04 until project completion.

PART 2: PRODUCTS

2.01 ALUMINUM WINDOWS

- A. Type: Aluminum Windows shall be fixed frame of size indicated on the drawings and design for thermal glazing.
- B. Construction: Framing material shall be TRACO NX-3800 Fixed Thermal Aluminum Window as manufactured by Kawneer or approved equivalent.

2.02 2.02 MATERIALS - Aluminum extrusions: extruded by the window manufacturer from commercial quality 6063-T5 alloy; free from defects impairing strength and durability.

2.03 2.03 FABRICATION

- A. Frame: all members double tubular; corners mitered, double gusset reinforced, factory-sealed with sealant conforming to AAMA 800-07, and crimped.
- B. Water control: frame weeps, foam baffles, and exterior hoods to allow water to drain by gravity and resist wind-driven water.

2.04 2.04 INSULATING GLASS UNITS

- A. Materials
 1. Spacer: extruded thermoplastic butyl with integrated desiccant.
 2. Spacer color: black.
 3. Secondary seal: silicone.
 4. Air space fill: argon.

- B. Performance
 - 1. Dual-seal durability: conformance to ASTM E 2190-02; visible, permanent IGCC certification label.
- C. Exterior glass lite
 - 1. Thickness: 1/8"
 - 2. Tint: clear
 - 3. Type: annealed with applied mullins and muntins, escription in paragraph 2.07
 - 4. 4. Coating: soft coat low E on #2 surface.
- D. Interior glass lite
 - 1. Thickness: 1/8"
 - 2. Tint: clear
 - 3. Type: annealed
 - 4. 4. Coating: soft coat low E on #3 surface

2.05 2.05 FINISH ON EXTERIOR ALUMINUM EXTRUSIONS

- A. Application: on clean extrusions free from serious surface blemishes; on exposed surfaces visible when installed product's operating sash are closed.
- B. Coating: PPG Duranar™ with resin containing 70% fluoropolymer; thermosetting; alternative finishes will not be acceptable.
- C. Quality standard: conforming to AAMA 2605-05, including 10 years Florida exposure and 4000 hours humidity tests.
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: electrostatic spray and oven bake by approved applicator.
- F. Coating quantity: minimum one primer coat and one color coat.
- G. Dry film thickness: minimum 1.2 mils on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards.

2.06 FINISH ON INTERIOR ALUMINUM EXTRUSIONS

- A. Application: on clean extrusions free from serious surface blemishes; on exposed surfaces visible when installed product's operating sash are closed.
- B. Coating: PPG Duranar™ with resin containing 70% fluoropolymer; thermosetting; alternative finishes will not be acceptable.
- C. Quality standard: conforming to AAMA 2605-05, including 10 years Florida exposure and 4000 hours humidity tests.
- D. Pretreatment: five-stage; zinc chromate conversion coating.
- E. Application: electrostatic spray and oven bake by approved applicator.
- F. Coating quantity: minimum one primer coat and one color coat.
- G. Dry film thickness: minimum 1.2 mils on exposed surfaces, except inside corners and channels.
- H. Color: chosen from manufacturer's standards.

2.07 MUNTINS AND MULLIONS

- A. Material: extruded aluminum or roll-formed aluminum; with exposed surfaces finished to match window color.
- B. Design: muntin bar cross-section profile and material chosen from manufacturer's standards.
- C. Patterns: grid patterns as shown on drawings.
- D. Location: exterior

PART 3: EXECUTION

3.01 PREPARATION - Prepare openings to be in tolerance, plumb, level and provide for secure anchoring.

3.01 3.02 INSTALLATION

- A. Install windows in accordance with manufacturer's recommendations and approved shop drawings with skilled craftspeople who have demonstrated a successful history of installing windows for ten (10) years.

- B. Provide required support and securely fasten and set windows plumb, square, and level without twist or bow.
- C. Apply sealant per sealant manufacturer's recommendations at joints, wipe off excess, and leave exposed sealant surfaces clean and smooth.

3.02 3.04 ADJUSTING AND CLEANING - Adjust windows as necessary for weathertightness, and leave windows clean and free of construction debris.

END OF SECTION

**SECTION 09900
PAINTS AND COATINGS**

PART 1: GENERAL

1.01 DESCRIPTION

- A. Work Included: Perform all work necessary and required for completion of the project as indicated. Such work includes the furnishing of all materials and equipment and the application and completion of all painting and painter's finish on interior window trim as required to complete the finishing of the project as shown and noted on the drawings and specified herein.
- B. Surfaces to be Painted:
 - 1. Window trim and sills, as noted on the drawings
- C. Painting shall include existing previously painted and new unpainted surfaces where indicated in accordance with paint systems described in this section. Previously painted surfaces shall receive a minimum two (2) coat finish.

1.02 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

1.03 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver all painting materials to the site in the manufacturer's original containers with labels intact and seals unbroken. Keep in a locked, well ventilated storage place assigned for this purpose. Receive, open, and mix all paint materials in this room. Storage space shall be kept clean and neat. Oily rags shall be removed and disposed of each day, and all other necessary precautions shall be taken to avoid danger of fires.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

- D. Do not exceed shelf life of any product.

1.04 ENVIRONMENTAL CONDITIONS

- A. Paint surfaces only when they are free from moisture. Receiving surfaces shall be properly dried out before proceeding with the work.

1.05 ENVIRONMENTAL PROTECTION

- A. Provide coating materials that conform to the restrictions of the local Air Pollution Control District. Notify the Architect of any paint specified that fails to conform. Do not use coatings having a lead content over 0.06 percent by weight of nonvolatile content. Comply with state requirements regarding control of hydrocarbon emissions - either volatile organic compound (VOC) content or photochemical reactivity.

PART 2: PRODUCTS

2.01 MATERIALS

- A. **Manufacturers:** Materials shall be the best quality products by the manufacturers listed. Products of Pittsburgh, Glidden, Sherwin Williams, or Duron which meet the requirements specified, are acceptable.
- B. **Color and Life of Film:** Colors of all surfaces finished under this section shall, at the end of one year, have remained free from serious fading, and variations, if any, shall be uniform.

PART 3: EXECUTION

3.01 PREPARATION OF SURFACES

- A. Start no painting or finishing until the surfaces to be painted or finished are in proper condition in every aspect. Surfaces that cannot be properly prepared by the painter for finishing shall not be painted or finished until they are rectified, unless otherwise instructed by the Architect.
- B. Surfaces to be painted shall be clean and free of dirt, dust, and any other substance which might interfere with the functioning of the painting system. All surfaces to be painted shall be in proper condition to accept, and assure proper adhesion and functioning of, the particular painting system or coating specified.

- C. Hand sandpaper wood surfaces and dust clean. Putty all nail holes, cracks, etc., after first or primer coat.

3.02 PAINT SYSTEMS

- A. Paint systems specified herein are products of PPG Industries, Inc., Pittsburgh Paints; unless otherwise noted and set a standard of quality for the product to be used. Paint of other manufacturers must be those listed in paragraph 2.01A of this section.

3.03 PAINTING - INTERIOR

- A. Paint Systems - Interior:
 - 1. Semi-gloss paint finish on wood:
 - (a) Prime coat - PPG enamel undercoater 6-6.
 - (b) Finish coat - PPG alkyd lo-sheen enamel 6-90.

3.04 CLEANUP AND CLEANING

- A. Upon completion of the painting work remove from the premises and dispose of all surplus material, empty containers and other debris resulting from painting operations.
- B. Clean and retouch work as necessary for a completed finish.
- C. Leave all glass areas, floors and walls, hardware, and any other surfaces clean and free from any paint, splatterings, smears, or smudges which are the result of painting operations.

END OF SECTION