



Bay Architects

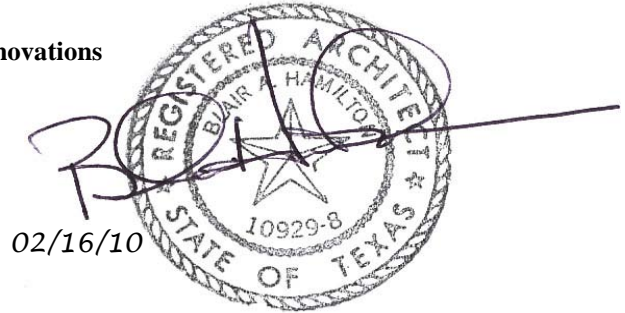
18201 Gulf Freeway
Post Office Box 891209
Houston, Texas 77289
Tel 281.286.6605
Fax 281.286.9606

ADDENDUM NO. 05

February 16, 2010

Project: **Dickinson High School Additions and Renovations**
Dickinson Independent School District

Prepared by: **Bay Architects, Inc.**
18201 Gulf Freeway
Webster, Texas 77598
Post Office Box 891209
Houston, Texas 77289
(281) 286-6605



Bay Project No.: **0743**

Prepared for: **Prospective Proposers. To be distributed by Bartlett-Cocke, Construction Manager.**

PART A NOTICE TO PROPOSERS:

Receipt of this Addendum shall be acknowledged on the Proposal Form. Failure to do so may subject Proposers to disqualification. Each Proposer shall make necessary adjustments and submit his proposal with full knowledge of all modifications, clarification, and supplemental data included therein.

- 01. This Addendum forms part of the Contract Documents and shall be incorporated integrally therewith. Where provisions of the following supplemental data differ from those of previously issued documents, this Addendum shall govern.
- 02. The following Contract Documents have been issued to date delineating the Work (Project):

Construction Documents	January 22, 2010
Addendum No. 01	February 4, 2010
Addendum No. 02	February 10, 2010
Addendum No. 03	February 12, 2010
Addendum No. 04	February 15, 2010
- 03. This Addendum consists of two (2) 8-1/2x11 written pages; fifteen (15) 8-1/2x11 pages Sections 08800 and 10522; and no sketches or full size sheets; as prepared by Bay Architects, Inc. Total pages: 17 pages

PART B CHANGES TO PRIOR ADDENDA

- 04. None

PART C CHANGES TO THE PROJECT MANUAL

- 05. Table of Contents; Part III. Specifications, Division 8 – Doors and Windows, Section 08800 Glazed Systems; Rename section as “Glazing Systems – Hurricane Resistant” and add page numbers 1-13.
- 06. Table of Contents; Section III. Specifications, Division 10 – Specialties, Section 10522 Fire Extinguisher and Cabinets; Add page numbers 1-2.
- 07. Section 08800 Glazed Systems: Remove blank page and replace with the attached Section 08800 Glazing Systems – Hurricane Resistant in its entirety. (13 pages)
- 08. Section 10522 Fire Extinguisher and Cabinets: Remove blank page and replace with the attached Section 10522 in its entirety. (2 pages)

PART D CHANGES TO THE DRAWINGS

- 09. None

PART D NEW ISSUED DRAWING SHEETS

- 10. None

PART E RE-ISSUED DRAWING SHEETS

- 11. None

END OF ADDENDUM

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SECTION 08800

GLAZING SYSTEMS - HURRICANE RESISTANT

Issued In Its Entirety in Addendum No. 05

CONDITIONS OF THE CONTRACT, SUPPLEMENTARY CONDITIONS AND DIVISION 1 APPLY TO THIS SECTION.

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Refer to the CM@R Proposal Instructions issued under a separate cover.
- B. Section Includes
 - 01 Exterior glass and aluminum framing systems, including storefront systems, fixed-glass windows, operable windows and curtain walls.
 - 02 Aluminum and glass entry doors.
 - 03 Glazing of plastic laminate doors.
 - 04 Glazing of hollow metal doors and hollow metal windows.
 - 06 Glazing of sound retardant doors.
 - 07 Mirrors (excluding framed toilet accessories).
 - 08 Horizontal sliding and projected windows.
- C. Related Sections
 - 01 Section 07900 – Building Sealants
 - 02 Section 08110 – Hollow Metal Doors and Frames
 - 03 Section 08213 – Plastic Laminate Wood Faced Doors
 - 04 Section 08710 - Finish Hardware

1.2 REFERENCES

- A. International Building Code 2006
- B. Texas Windstorm Insurance Association
- C. Miami-Dade County Protocol TAS-201, TAS-202, and TAS-203
 - 01 Approval Pending (HR-250 IMPACT WALL)
 - 02 Approval 04.0209.03 (375 MSD DOORS IN HR-250 IMPACT WALL)
- D. Aluminum Association (AA)
 - 01 DAF-45 Designation System for Aluminum Finishes.
- E. American Architectural Manufacturers Association (AAMA)
 - 01 AAMA Aluminum Curtain Wall Design Guide Manual.
 - 02 AAMA 501.2 Field Check of Metal Curtain Walls for Water Leakage.
 - 03 AAMA 2605 Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels.
 - 04 AAMA 606.1 Specifications and Inspection Methods for Integral Color Anodic Finishes for Architectural Aluminum.
 - 05 AAMA 607.1 Specifications and Inspection Methods for Clear Anodic Finishes for Architectural Aluminum.

1	06	AAMA 608.1	Specification and Inspection Methods for Electrolytically
2			Deposited Color Anodic Finishes for Architectural
3			Aluminum.
4	07	AAMA 701.2	Specifications for Pile Weather-stripping.
5	08	AAMA Manual #10	Care and Handling of Architectural Aluminum From
6			Shop to Site.
7			
8	F.	American National Standards Institute (ANSI)	
9	01	ANSI Z97.1	Specifications and Methods of Test for Safety Glazing
10			Material Used in Buildings.
11			
12	G.	American Society for Testing and Materials (ASTM)	
13	01	ASTM A36	Structural Steel.
14	02	ASTM A123	Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel
15			Products.
16	03	ASTM A525	General Requirements for Steel Sheet, Zinc-Coated
17			(Galvanized) by the Hot-Dip Process.
18	04	ASTM A526	Sheet Steel, Zinc Coated (Galvanized) by the Hot-Dip
19			Process,
20			Commercial Quality.
21	05	ASTM B209	Aluminum and Aluminum-Alloy Sheet and Plate.
22	06	ASTM B221	Aluminum-Alloy Extruded Bars, Rods, Wire, Shapes, and
23			Tubes.
24	07	ASTM B308	Aluminum-Alloy 6061-T6 Standard Structural Shapes,
25			Rolled or
26			Extruded.
27	08	ASTM C716	Installing Lock-Strip Gaskets and Infill Glazing Materials.
28	09	ASTM C920	Elastomeric Joint Sealants.
29	10	ASTM E283	Rate of Air Leakage Through Exterior Windows, Curtain
30			Walls,
31			and Doors.
32	11	ASTM E330	Structural Performance of Exterior Windows, Curtain
33			Walls,
34			and Doors by Uniform Static Air Pressure Difference.
35	12	ASTM E331	Test Method for Water Penetration of Exterior Windows,
36			Curtain Walls, and Doors by Uniform Static Air Pressure
37			Difference.
38	13	ASTM E773	Test Method for Seal Durability of Sealed Insulating
39			Glass Units.
40	14	ASTM E774	Sealed Insulating Glass Units.
41	15	ASTM C1503-01	Standard Specifications for Silvered Flat Plat Glass Mirror
42			
43	H.	Consumer Product Safety Commission (CPSC)	
44	01	16 CFR 1201	Safety Standard for Architectural Glazing Materials.
45			
46	I.	Federal Specifications (FS)	
47	01	TT-P-645A	Primer, Paint, Zinc Chromate, Alkyd Type.
48	02	DD-G-001403 B	Glass, Float, Sheet, Figured, Coated (Heat-Strengthened
49			and Tempered)
50	03	TT-S-00230	Sealing Compound: Synthetic Rubber Base and TT-S-
51		00203C	
52	04	TT-S-001657	Sealing Compound: Butyl Rubber Base
53	05	DD-G-451d	Glass, Float Or Plate, Sheet, Figured, Flat, For Glazing,
54			Mirrors And Other Uses) (

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J. Flat Glass Marketing Association (FGMA)
01 Glazing Manual.

1.3 SYSTEM REQUIREMENTS

A. General Standard: In addition to IBC 2006 and the Texas Windstorm Insurance Association requirements shown or specified, comply with applicable provisions of Miami-Dade County Protocol TAS-201, TAS-202 and TAS-203, ASTM 1996 and 1886 and the Aluminum Curtain Wall Design Guide Manual for design, materials, fabrication and installation of component parts.

- B. Design Requirements: Based on specific project design load requirements.
 - 01 Metal stick framed systems with interior and exterior exposed metal framing.
 - 02 System manufacturer shall provide low profile entrance frames as an integral part of the curtain wall system.
 - 03 System manufacturer shall provide curtain wall systems, including necessary modifications to meet specified requirements and maintaining visual design concepts.
 - 04 Fabricate glazing systems for exterior glazing at vision areas and exterior glazing at spandrel areas.
 - 05 Perimeter conditions shall allow for installation tolerances, expansion and contraction of adjacent materials, and sealant manufacturer's recommended joint design.
 - 06 Drawings are diagrammatic and do not purport to identify nor solve problems of thermal or structural movement, glazing, anchorage or moisture disposal.
 - 07 Requirements shown by details are intended to establish basic dimension of unit, sight lines and profiles of members.
 - 08 Do not assume glass, sealants, and interior finishes contribute to framing member strength, stiffness, or lateral stability.
 - 09 Attachment considerations are to take into account site peculiarities and expansion and contraction movements so there is no possibility of loosening, weakening or fracturing connection between units and building structure or between units themselves.
 - 10 Anchors, fasteners and braces shall be structurally stressed not more than 50% of allowable stress when maximum loads are applied.
 - 11 System shall drain to exterior face of wall, water entering joints and condensation occurring within system by drain holes and gutters of adequate size to evacuate water without infiltration to interior or the top of lower lites of glass. No visible weep holes allowed.
 - 12 Provide concealed fastening.
 - 13 Metal faces are required to be visually flat under all lighting conditions, subject to acceptance of Architect.
 - 14 Use rigid isolators to maintain flatness of face cap.
 - 15 Provide uniform color and profile appearance at components exposed to view.
 - 16 Provide pre-punched pressure plates to ensure correct quantity and spacing of fasteners.

C. Performance Requirements
01 Air infiltration: Air leakage through fixed light areas of storefront shall not exceed 0.02 cfm per square foot of surface area when tested in accordance with Miami – Dade County Building Code Compliance Office (BCCO)

- 1 protocol (TAS-202), and ASTM E283 at differential static pressure of 6.24
2 psf.
- 3 02 Water infiltration: No uncontrolled leakage when tested in accordance with
4 Miami – Dade County Building Code Compliance Office (BCCO) protocol
5 (TAS-202), and ASTM E 331 at test pressure of 15 psf.
- 6
- 7 D. Thermal Requirements
- 8 01 Framing systems shall accommodate expansion and contraction movement
9 due to surface temperature differentials of 180°F without causing buckling,
10 stress on glass, failure of joint seals, excessive stress on structural elements,
11 reduction of performance, or other detrimental effects.
- 12 02 Ensure doors function normally within limits of specified temperature range.
- 13
- 14 E. Hurricane Resistance Requirements
- 15 01 Large Missile Impact per Miami – Dade County Building Code Compliance
16 Office (BCCO) protocol (TAS-201), and (ASTM E 1886/1996) test
17 requirements.
- 18 02 Cyclic Load Test per Miami – Dade County Building Code Compliance
19 Office (BCCO) protocol (TAS-203), and ASTM E 1886/1996 test
20 requirements.
- 21 03 Uniform Static Load Test per Dade – County Building Code Compliance
22 Office (BCCO) protocol (TAS-202), and ASTM E 330.
- 23
- 24 F. Structural Requirements, as measured in accordance with ANSI/ASTM E330
- 25 01 Wind loads for exterior assemblies are to be engineered and designed to
26 withstand positive and negative wind loads normal to plane of wall in typical
27 zone at 120mph minimum.
- 28
- 29 G. Laboratory Testing: In accordance with Miami-Dade County protocol TAS-201,
30 TAS-202, and TAS-203, and ASTM E 1886 and 1996 test procedures.
- 31

32 **1.4 SUBMITTALS**

- 33
- 34 A. Comply with Section 01300.
- 35
- 36 B. Manufacturer's specifications and other data needed to prove compliance with
37 specified requirements.
- 38
- 39 C. Manufacturer's complete installation instructions for system(s) proposed to be
40 provided. Include fastener types, sizes and locations.
- 41
- 42 D. Shop Drawings: Complete engineered shop drawings by manufacturer, indicating
43 elevations, sections, substrates, finishes, hardware and installation details. Details
44 shall indicate / include actual details relative specifically to this project; including
45 substrates and interfacing work. Standard, generic details shall not be acceptable.
- 46
- 47 E. Samples: Show manufacturer's full range of colors
- 48 01 Samples of each type of glass (12" x 12" minimum)
- 49 02 In place sample of sealant at frame perimeter for Architect's approval.
50 Architect shall select samples for review from manufacturer's full color line.
- 51 03 Obtain hardware templates from finish hardware supplier.
- 52 04 Samples of framing finish for approval and fastener types.
- 53

- 1 F. Mock-up
- 2 01 In conjunction with mock-up wall required for masonry and back-up walls,
- 3 provide a mock-up window incorporated into the masonry mock-up.
- 4 02 Mock-up window shall be minimum 16" x 16" and shall include head, jamb,
- 5 sill framing members and sub-sill flashing. Glass is not required.
- 6 03 Construct in such a way that all fastening methods are viewable.
- 7 04 Perimeter of window shall be sealed continuous.
- 8

9 **1.5 QUALITY ASSURANCE**

- 10
- 11 A. Use adequate numbers of skilled workmen who are thoroughly trained and
- 12 experienced in the necessary crafts, and who are completely familiar with the
- 13 specified requirements and the methods needed for proper performance of the work
- 14 of this Section.
- 15
- 16 B. Provide aluminum framing systems, doors, and windows from one source and
- 17 supplied by a single manufacturer.
- 18
- 19 C. In addition to complying with pertinent codes and regulations of governmental
- 20 agencies having jurisdiction, comply with pertinent recommendations contained in:
- 21 01 Flat Glass Marketing Association:
- 22 a. Glazing Sealing Systems Manual
- 23 b. Glazing Manual
- 24

25 **1.6 WARRANTY**

- 26
- 27 A. Submit a written warranty, executed by the entrance manufacturer, agreeing to repair
- 28 or replace units that fail in workmanship within specified warranty period. Failures
- 29 include, but are not limited to:
- 30 01 Structural and performance failures, including excessive deflection,
- 31 excessive leakage, air infiltration beyond specified requirements.
- 32 02 Faulty operation of hardware directly related to items listed above.
- 33 03 Deterioration of metals, metal finishes, and other materials beyond normal
- 34 weathering.
- 35 04 Silver spoilage on wall mirrors.
- 36
- 37 B. Manufacturer's warranty period shall be 5 years from date of Substantial Completion.
- 38

39 **PART 2 - PRODUCTS**

40

41 **2.1 MANUFACTURERS**

- 42
- 43 A. Aluminum Framing Systems and Doors
- 44 01 Vistawall Architectural Products, (basis of design / specification)
- 45 02 Kawneer
- 46 03 YKK AP America, Inc.
- 47 04 U.S. Aluminum
- 48 05 ARCH Aluminum & Glass Co., Inc.
- 49 06 All products and assemblies shall meet or exceed all specified requirements.
- 50
- 51 B. Glass
- 52 01 Oldcastle Glass (basis of design / specification)
- 53 02 PPG Industries
- 54 03 Ford Glass
- 55 04 AFG Industries, Inc.

2.2 GLASS MATERIALS

A. Glass Types

- 01 Type G1-Tinted Laminated Glass (Hurricane Resistant): ASTM C1172, Consisting of 2 sheets of heat-strengthened glass ¼” thick complying with ASTM C1048, laminated with a .090” thick PVB interlayer as manufactured by Solutia. Other thicknesses of the “Saflex” PVB layer such as .075” “Vanceva” by Solutia will be acceptable as long as the glass system has been tested and certified to meet the Hurricane Resistance requirements indicated herein. Glass shall meet the Consumers Product Safety Commission 16 CFR 1201 and the safety glass requirements of ANSI Z97.1 current edition. The outboard sheet will be tinted equal to PPG “Solar” Series. The inboard sheet will be clear.
- 02 Type G2 – Tinted Insulated Glass (Hurricane Resistant): Outboard sheet shall be tinted equal to PPG “Solar” Series, ¼” thick, heat-strengthened. The inboard sheet will be clear laminated glass consisting of 2 sheets of clear heat-strengthened glass complying with ASTM C1048, laminated with a .090” thick PVB “Sentry Glass Plus” interlayer as manufactured by Solutia. Total thickness of the insulated glass unit will be nominal 1-1/4” thick. The air space between the outboard and inboard sheets will be dual sealed and meeting the certification requirements of the IGCC for a CBA rating.
- 03 Type G3 – Wire Glass: ASTM C1036, Type II, rolled or flat glass, Form I, wired polished both sides, quality q⁸, M2, mesh, diamond pattern, ¼” thick.
- 04 Type G4 – Clear Laminated Glass: ASTM C1172, consisting of 2 sheets of heat-strengthened glass 1/8” thick complying with ASTM C1048, laminated with a .030” thick “Saflex” PVB interlayer.
- 05 Type G5 – Clear Tempered Glass: ASTM C1048, Type 1, plate or float, flat, quality q³, fully tempered, ¼” thick.
- 06 Type G6 – Spandrel Glass (Hurricane Resistant): Ceramic grit coated laminated glass, consisting of 2 sheets of heat-strengthened glass ¼” thick complying with ASTM C1048, laminated with a .090” thick PVB “Saflex” interlayer manufactured by Solutia. Ceramic grit on interior sheet.
- 07 Type G7 – Acoustical Glass: One sheet of ¼” clear heat-strengthened glass and one layer of 3/8” clear heat-strengthened glass laminated with a .030” PVB interlayer.

B. Glazing Materials at Hollow Metal Frames

- 01 General: Use glazing compound and preformed glazing sealants approved for the application, except as otherwise specified, conforming to Glazing Materials portion of the FGMA Glazing Manual.
- 02 Sealant:
 - a. One part acrylic polymer sealant conforming to Fed. Spec. TT-S-00230 or silicone, Fed. Spec. TT-S-0023-C. Use for glazing of all fixed glass. Include primer as recommended by manufacturer.
 - b. Color: Shall as selected by Architect from manufacturer’s full range
 - c. All sealants to be compatible w / adjacent material per mfg. instructions.

- 1 03 Setting Blocks: Hard rubber or clean grain softwood.
2 04 Back-up Material: Foamed polyethylene or polystyrene rod stock; sizes as
3 required by joint condition, and compatible with sealant.
4 05 Glazing Tape: DAP #1202 or as approved.
5 06 Glazing Gaskets: Extruded neoprene, free of porosity, surface defects,
6 dimensional irregularities, and conforming to physical properties of ASTM
7 C502.
8 07 Use of metal sash putty will not be permitted, but compound conforming to
9 Fed. Spec. T-G-410 will be permitted. The use of non-skinning compounds,
10 non-resilient type preformed sealers and preformed impregnated type
11 gaskets will not be permitted.
12
- 13 C. Unframed Plate Wall Mirrors
14 01 Glass: 1/4 inch plate or float, Class 1, mirror glazing quality.
15 02 Silvering: Electroplated copper backing with double paint protective
16 coating.
17 03 Edges: Rounded off and polished.
18 04 Mounting Adhesive: Silicone or other mirror setting cement suitable for
19 intended application as recommended by the manufacturer to provide long
20 life under hard use.
21 05 Clamps:
22 a. Knap & Vogt No. 278 top, 3/8 inch.
23 b. Provide 3/8 inch continuous aluminum J-shaped channel for bottom
24 support as manufactured by J. G. Braun Co., or equal.
25
26 06 Coordinate with other trades as required to provide proper interface with
27 dance rail and similar type work.
28

29 **2.3 FRAMING MATERIALS AND ACCESSORIES**

- 30
- 31 A. Design of Hurricane Resistant aluminum framing is based on Vistawall series HR-
32 250 Impact-Resistant System.
33 01 2½" x 6¾" mullion profiles
34 02 pressure glazed, front set, interior loaded, stick wall system;
35 03 dry-glaze fully gasketed for 9/16" laminated glazing in-fills or 1-1/4"
36 laminated glass as specified and indicated.
37
- 38 B. Aluminum
39 01 ASTM B221, alloy 6063-T5 for extrusions; ASTM B209, alloy 5005-H16
40 for sheets; or other alloys and temper recommended by manufacturer
41 appropriate for specified finish.
42 02 Minimum thickness of 0.125 inch for framing members and 0.050 inch for
43 glazing stops and similar components.
44
- 45 C. Internal Reinforcing
46 01 ASTM A36 for carbon steel; or ASTM B308 for structural aluminum.
47 02 Shapes and sizes to suit installation.
48 03 Shop coat steel components after fabrication with alkyd type zinc chromate
49 primer complying with FS TT-P-645.
50 04 Provide steel reinforcing in aluminum framing as required to achieve
51 specified wind load resistance.
52

- 1 D. Inserts and Anchorage Devices
2 01 Manufacturer's standard formed or fabricated assemblies, steel or aluminum,
3 of shapes, plates, bars or tubes.
4 02 Hot-dip galvanize steel assemblies after fabrication; comply with ASTM
5 A123, 2.0 ounce minimum coating.
6 03 Provide all anchoring angles, plates fasteners and accessories required for
7 secure attachment to adjacent work.
8
9 E. Fasteners
10 01 Non-magnetic stainless steel or cadmium plated steel coated with yellow or
11 silver iridescence plating, compatible with materials being fastened.
12 02 Series 300 stainless steel for exposed locations. Cadmium plated steel with
13 0.0005 inch plating thickness and color chromate coated for concealed
14 locations.
15 03 Provide nuts or washers of design having means to prevent disengagement;
16 deforming of fastener threads is not acceptable.
17 04 Provide concealed fasteners wherever possible.
18 05 For exposed locations, provide countersunk flathead fasteners with finish
19 matching item fastened.
20 06 All fasteners used to secure the sub-sill flashing and sill frame member shall
21 be bedded in sealant at penetrations through window assembly components.
22 Heads of fasteners at these locations shall be covered with sealant.
23
24 F. Expansion Anchor Devices: Lead-shield or toothed-steel, drilled-in, expansion bolt
25 anchors.
26
27 G. Shims: Non-staining, non-ferrous, type as recommended by system manufacturer.
28
29 H. Protective Coatings: Cold applied asphalt mastic complying with SSPC-Paint 12,
30 compounded for 30 mil thickness for each coat; or alkyd type zinc chromate primer
31 complying with FS TT-P-645.
32
33 I. Glazing Gaskets
34 01 Compression type design, exterior replaceable, extruded neoprene. Interior
35 is a closed cell sponge tape gasket.
36 02 Comply with ASTM C509 or C864.
37 03 Profile and hardness as necessary to maintain uniform pressure for
38 watertight seal.
39 04 Manufacturer's standard black color.
40
41 J. Sub-Sill Flashing
42 01 All exterior glazed systems shall be furnished with continuous sub-sill
43 flashing pans, spanning the full width of the rough opening.
44 02 Sub-sill flashing shall be minimum 0.065" aluminum; and heavier if
45 required for suitably welded joints.
46 03 Fabricate with integral (turned up) end dams and back dams. Height of dams
47 shall be 3/4".
48 04 Open vertical joint at end dam / back dam junction shall be welded
49 continuous to form a seamless dam component directing any / all trapped
50 water to outside face of the framing as indicated on the Drawings.
51 05 Provide in configuration to match the sill frame shape / configuration.
52 06 Finish of sub-sill flashing shall match frame finish.
53

- 1 K. Miscellaneous Materials
- 2 01 Provide material isolators at all dissimilar metals in contact with aluminum
- 3 framing components.
- 4 02 Where indicated on the Drawings provide minimum 0.080" aluminum
- 5 extrusions or break metal between non-contiguous framing components (i.e.
- 6 segmented radius walls, column wraps, etc.). Fabricate as required for
- 7 concealed fastening.
- 8

9 **2.4 ALUMINUM & GLASS DOORS**

- 10
- 11 A. Design of Hurricane Resistant aluminum and glass doors is based on Vistawall series
- 12 MSD-375 Impact Resistant Entrance Doors.
- 13 01 Fabricated to interface with framing system described above.
- 14 02 Door, frame and hardware assembly shall be certified to meet all wind load
- 15 performance and material requirements same as described for framing
- 16 above.
- 17 03 Latching: 3-point lock / latch mechanism (panic device and top & bottom
- 18 concealed flush-bolts) capable of interfacing with electronic control opening
- 19 device.
- 20 04 Continuous gear hinge per hardware schedule.
- 21 05 Lockset must be compatible to accept district standard Sargent cylinder /
- 22 keying system.
- 23

24 B. MIG welded corner construction.

- 25
- 26 C. Frame Profile:
- 27 01 Depth: 1-3/4"
- 28 02 Stiles: 4-3/4"
- 29 03 Rails: 4" top (provide deeper rail if required for proper installation of
- 30 closer); and 9" bottom
- 31 04 Intermediate Rail: 10"
- 32

33 D. Furnish doors complete with all accessories required for a complete assembly. Refer

34 to hardware schedule (section 08710) for additional requirements.

35

36 **2.5 SYSTEM FABRICATION**

37

- 38 A. Take accurate field measurements to verify required dimensions prior to fabrication.
- 39

- 40 B. Location of exposed joints are subject to Architect's acceptance.
- 41

- 42 C. Provide rigid, thermal break isolators to prevent exterior and interior aluminum
- 43 framing members from being in contact with each other.
- 44

- 45 D. Fabricate components in accord with approved shop drawings. Remove burrs and
- 46 ease edges. Shop fabricate to greatest extent practicable to minimize field cutting,
- 47 splicing, and assembly. Disassemble only to extent necessary for shipping and
- 48 handling limitations.
- 49

- 50 E. Steel Components
- 51 01 Clean surfaces after fabrication and immediately prior to application of
- 52 primer in accord with SSPC-SP2 or SSPC-SP3 at manufacturer's option.
- 53 02 Apply specified shop coat primer in accord with manufacturer's instructions
- 54 to provide 2.0 minimum dry film thickness.

- 1
- 2 F. Fabricate components true to detail and free from defects impairing appearance,
- 3 strength or durability. Fabricate custom extrusions indicated and as necessary for
- 4 complete installation.
- 5
- 6 G. Fabricate components to allow for accurate and rigid fit of joints and corners. Match
- 7 components carefully ensuring continuity of line and design. Ensure joints and
- 8 connections will be flush and weathertight. Ensure slip joints make full, tight contact
- 9 and are weathertight.
- 10
- 11 H. Reinforce components as required at anchorage and support points, at joints, and at
- 12 attachment points for interfacing work.
- 13
- 14 I. Provide structural reinforcing within framing members where required to maintain
- 15 rigidity and accommodate design loads.
- 16
- 17 J. System design and sealants to accommodate internal weep and drainage system not
- 18 visible to the exterior.
- 19
- 20 K. Head and sill extrusions act as gutter and weep water to exterior; do not penetrate
- 21 sections with fasteners.
- 22
- 23 L. Allow for adequate clearance around perimeter of system to enable proper installation
- 24 and for thermal movement within system.
- 25
- 26 M. Separate dissimilar metals with protective coating or preformed separators to prevent
- 27 contact and corrosion.
- 28

29 **2.6 VERTICAL SLIDING TICKET WINDOW**

- 30
- 31 A. Design is based on Nissen & Company Series C vertical sliding counter window.
- 32 01 Other manufacturers shall be considered provide they meet or exceed all
- 33 attributes, performance and operation of specified item.
- 34
- 35 B. Nissen model C-3636, nominal 36"W x 36"H window unit.
- 36
- 37 C. Nylon runners over coiled compression springs.
- 38
- 39 D. Glazing shall be Type G-5 – 1/4" tempered glass as described above.
- 40
- 41 E. Frame finish shall be clear anodized aluminum.
- 42

43 **2.7 FINISH**

- 44
- 45 A. Clear Anodized
- 46 01 Conforming to AA-M12C22A31 and AAMA 607.1.
- 47 02 Architectural Class I, etched, medium matte, clear anodic coating, 0.7 mil
- 48 minimum thickness.
- 49
- 50 B. Factory Painted Finish
- 51 01 Conforming to AAMA 2605
- 52 02 Fluoropolymer coating with 70% PVDF resin and durable ceramic pigments.
- 53 03 Kynar 500, Hylar 5000, or equal.
- 54 04 Primer: 0.2 to .03 mils

- 1 05 Finish Coat(s): factory applied and oven baked for a top coat film thickness
2 of 1.0 mil minimum. Clear top coat, if required shall be 0.4 to 0.8 mils.
3 06 Color as selected by the Architect from manufacturer's full range of colors.
4

5 C. Refer to the Drawings for locations of anodized and painted finishes.
6

7 **PART 3 - EXECUTION**
8

9 **3.1 SURFACE CONDITIONS**
10

11 A. Thoroughly examine conditions at each and every location under which work of this
12 Section will be performed.

13 01 Verify that each rough opening is the correct size for the framing being
14 installed. Maximum allowable joint at perimeter of framing shall be 5/8".
15 Inform general contractor of any non-conforming rough openings and do not
16 proceed until unsatisfactory conditions are corrected.

17 02 Verify that the sub-sill substrate is continuous, solid, level and at the proper
18 elevation for installation of sub-sill flashing. Sub-sill flashing must be set in
19 a 100% bed of sealant without any voids. Do not proceed until
20 unsatisfactory conditions are corrected.
21

22 B. Verify that wood blocking, thru-wall flashing, masonry and other adjacent work is
23 installed as required for the proper installation of aluminum framing prior to
24 proceeding. Inform general contractor of any non-conforming work and do not
25 proceed until unsatisfactory conditions are corrected.
26

27 C. Clean glazing channels, stops, and rabbets to receive the glazing materials, making
28 free from obstructions and deleterious substances which might impair the work.

29 01 Remove protective coatings which fail in adhesion or interfere with bond of
30 sealants.

31 02 Comply with manufacturer's instructions for final wiping of surfaces
32 immediately prior to application of primer and glazing compounds or tapes.

33 03 Prime surfaces to receive glazing compounds in accordance with
34 manufacturer's recommendations.
35

36 **3.2 INSTALLATION – ALUMINUM FRAMING AND ENTRY DOORS**
37

38 A. Install in accordance with manufacturer's instructions and applicable provisions of
39 AAMA Aluminum Curtain Wall Design Guide Manual, firmly anchored for a long
40 life under hard use.
41

42 B. Align assemblies plumb and level, free of warp or twist, aligning with adjacent Work.
43

44 C. All sill members of fixed frames shall be installed with continuous aluminum sub-sill
45 flashing.

46 01 Set sill flashing in 100% bed of sealant.

47 02 All fasteners used to anchor sub-sill flashing shall be completely bedded in
48 sealant prior to installation of sill framing.

49 03 Coordinate with dampproofing sub-contractor to install additional thru-wall
50 flashing at base of jambs to lap over / onto aluminum sub-sill flashing –
51 prior to installation of sill framing member(s). Coordinate as required.
52

- 1 D. Shim and center framing within rough opening. Maximum sealant joint at perimeter
2 of framing shall be 5/8". Coordinate with other trades to correct rough opening where
3 perimeter joint will exceed 5/8".
4
- 5 E. Erection Tolerances
6 01 Maximum Deviation from Vertical: 1/8 inch in any story and 1/4 inch in
7 any 45 foot run.
8 02 Maximum Deviation from Horizontal: 1/8 inch in any 30 foot run.
9 03 Maximum Deviation from True Alignment: 1/32 inch from any two
10 abutting units; and horizontal components meeting at a vertical mullion.
11 Allow no edge projections.
12 04 Maximum Joint Cap: 1/32 inch.
13 05 Maximum Openings Between Movable Glazing Stop and Adjacent Member:
14 1/32 inch.
15
- 16 F. Separate dissimilar materials at contact points, including metal in contact with
17 masonry or concrete surfaces, with protective coating or preformed separators to
18 prevent contact and electrolytic action.
19
- 20 G. If necessary to avoid damaging aluminum mullion covers, do not apply mullion
21 covers until building is closed in, roofing is installed and no alkaline substances can
22 be washed from building onto curtain wall system.
23

24 3.3 INSTALLATION – GLASS IN ALUMINUM FRAMING 25

- 26 A. Inspect each piece of glass immediately prior to start of installation.
27 01 Do not install items which are improperly sized, have damaged edges, are
28 scratched, abraded, or damaged in any other manner.
29 02 Do not remove labels from glass until so directed by the Architect.
30 03 Install glass so distortion waves, if present, run in a horizontal direction.
31
- 32 B. Locate setting blocks at sills one quarter of the width of the glass in from each end of
33 the glass, unless otherwise recommended by the glass manufacturer.
34 01 Use blocks of proper size to support the glass in accordance with the
35 manufacturer's recommendations.
36 02 Provide spacers for all glass sizes larger than 50 united inches, to separate
37 glass from stops, except where continuous glazing gaskets or felts are
38 provided.
39 a. Locate spacers no more than 24 inches apart, and no closer than 12
40 inches to a corner.
41 b. Place spacers opposite one another.
42 c. Make bite of spacer on glass 1/4 inch or more.
43
- 44 C. Set glass in a manner which produces the greatest possible degree of uniformity in
45 appearance.
46
- 47 D. Do not use two different glazing materials in the same joint system, unless the joint
48 use is approved in advance by the Architect.
49
- 50 E. Mask, or otherwise protect surfaces adjacent to installation or sealants.
51
- 52 F. Install all glass, gasket and aluminum framing in strict accordance with
53 manufacturer's printed instructions.
54

- 1 G. Caulk joints continuous at exterior and interior faces of framing and elsewhere as
2 indicated, as required to meet performance specifications using materials specified in
3 Sealants - Section 07900. Follow sealant manufacturer's printed instructions for the
4 installation of his product.
5

6 **3.4 INSTALLATION – GLASS IN ALUMINUM FRAMING**

7

- 8 A. General: Use glazing compound and preformed glazing sealants approved for the
9 application, except as otherwise specified, conforming to Glazing Materials portion
10 of the FGMA Glazing Manual.
11
- 12 B. Sealant
- 13 01 One part acrylic polymer sealant conforming to Fed. Spec. TT-S-00230 or
14 silicone, Fed. Spec. TT-S-0023-C. Use for glazing of all fixed glass.
15 Include primer as recommended by manufacturer.
16 02 Color: Shall as selected by Architect from manufacturer's full range.
17 03 All sealants to be compatible w / adjacent material per mfg. instructions.
18
- 19 C. Setting Blocks: Hard rubber or clean grain softwood.
20
- 21 D. Back-up Material: Foamed polyethylene or polystyrene rod stock; sizes as required
22 by joint condition, and compatible with sealant.
23
- 24 E. Glazing Tape: DAP #1202 or as approved.
25
- 26 F. Glazing Gaskets: Extruded neoprene, free of porosity, surface defects, dimensional
27 irregularities, and conforming to physical properties of ASTM C502.
28
- 29 G. Use of metal sash putty will not be permitted, but compound conforming to Fed.
30 Spec. T-G-410 will be permitted. The use of non-skinning compounds, non-resilient
31 type preformed sealers and preformed impregnated type gaskets will not be
32 permitted.
33

34 **3.5 PROTECTION**

35

- 36 A. Protect glass from breakage after installation by promptly installing streamers or
37 ribbons, suitably attached to the framing and held free from glass. Do not apply
38 warning markings, streamers, ribbons, or other items directly to the glass, except as
39 specifically directed by the Architect.
40
- 41 B. Protect all window framing during and after installation from marring, blemishes,
42 scratches and damage due to incidental adjacent work. If damaged, make all
43 necessary repairs or replacements in accordance with the manufacturer's
44 recommendations and as directed by the Architect.
45

46 **3.6 CLEANING**

47

- 48 A. Clean surfaces in compliance with manufacturer's recommendations; remove excess
49 mastic, mastic smears, and other foreign materials.
50
- 51 B. Clean metal surfaces exercising care to avoid damage.
52

53
54 **END OF SECTION**

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SECTION 10522

FIRE EXTINGUISHER AND CABINETS

Issued In Its Entirety in Addendum No. 05

CONDITIONS OF THE CONTRACT, SUPPLEMENTARY CONDITIONS AND DIVISION 1 APPLY TO THIS SECTION.

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Refer to the CM@R Proposal Instructions issued under a separate cover.
- B. Refer to Section 01300 - Submittals for substitutions.

1.2 SUBMITTALS

- A. Product Data: Manufacturer's product data and specifications for all products proposed to be furnished.
- B. Manufacturer's installation instructions for this application.
- C. Shop Drawings: Detailed shop drawings indicating installation details and interface with adjacent work.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Fire Extinguisher Cabinets (designated 'FEC' on the Drawings):
 - 01 Nominal 24" x 9 1/2" x 6" inside box dimension
 - 02 Semi-recessed type with maximum 3-1/2 inch protrusion with rolled edge return trim.
 - 03 Concealed hinge with spring roller latch catch.
 - 04 Stainless steel door – no glass - with non-protruding / recessed handle, complying with requirements of A.D.A. and Texas Accessibility Standards.
 - 05 Silk-screened lettering "Fire Extinguisher".
 - 06 Finish of Exterior: Stainless steel. Finish of Interior: Standard
 - 07 All fire extinguisher cabinets shall be furnished with 5 lb. fire extinguisher.
 - 08 Provide brackets within all cabinets.
- B. Fire Extinguishers (designated 'FE' on the Drawings)::
 - 01 Multi-purpose dry chemical with UL 4A-60 A:B:C and FM approved;
 - 02 Capacity: 5 lb.
 - 03 Provide initial inspection tag for each extinguisher.
 - 04 Provided updated inspection tags at time of Substantial Completion.
- C. Provide standard wall hook, surface mounted brackets for all fire extinguishers in mechanical rooms, electrical rooms and similar locations.

1 **2.2 MANUFACTURERS**

- 2
- 3 A. Fire Extinguisher Cabinets:
- 4 01 Larsen's Manufacturing Co.
- 5 02 J. L. Industries
- 6
- 7 B. Fire Extinguishers:
- 8 01 Amerex
- 9 02 Bager

10

11 **PART 3 - EXECUTION**

12

13 **3.1 INSTALLATION**

- 14
- 15 A. Provide or coordinate for provision of all required 2X wood blocking in walls as
- 16 required for proper and secure installation of fire extinguishers and extinguisher
- 17 cabinets.
- 18
- 19 B. Install in openings prepared by others in accordance with manufacturer's printed
- 20 instructions.
- 21
- 22 C. Install bracket mounted fire extinguishers (no cabinet) at all mechanical rooms, central
- 23 plant, boiler room and electrical rooms whether indicated on the Drawings or not.
- 24
- 25 D. Prior to, and as a condition of Substantial Completion, verify all extinguishers are at
- 26 full capacity and are "green tagged" by governing authority.
- 27
- 28
- 29

END OF SECTION