

# Addendum Number 1

Project: 4071.10 Asylum June 13, 2016

To: Prospective Bidders

From: WBRC ARCHITECTS · ENGINEERS 44 Central Street Bangor, ME 04401-5116 (207) 947-4511 phone (207) 947-4628 fax www.wbrcae.com

This Addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated June 6, 2016, as noted below. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of the following:

- Clarifications
- Specification Changes
- Drawing Changes
- Pre-Bid Meeting Minutes & Attendee Sheet
- Section 055113
- Section 084113
- Section 084413
- Section 323119
- Sheet AE102B
- Sheet AE114B
- Sheet AE205
- Sheet AE206
- Sheet AE401
- Sheet AE402
- Sheet AE403
- Sheet AE404
- Sheet AE513
- Sheet AE515
- Sheet AE520
- Sheet AE603
- Sheet AE608
- Sheet EL104
- Sheet EP104
- Sheet CP101

# CLARIFICATIONS:

- 1. June 10, 2016, Pre-Bid Meeting Minutes and Attendee Sheet attached.
- 2. Q: Is a cost increase an option in order to expedite the schedule? A: Both cost and the ability to meet or beat the proposed schedule will be selection factors in the bid process.

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- 3. Q: Will the piping for the walk-in cooler be provided by the Food Service Equipment Vendor? A: All rough-ins and final connections for the kitchen/bar equipment are to be provided by the GC. Refrigerant piping, piped between the outdoor unit and indoor evaporator unit of each walk-in cooler/freezer will be provided by the food service vender. Condensate drain piping from each of the walk-in cooler indoor evaporator units and "freeze protection" heat trace on these drains are all part of Division 22, Plumbing to be provided by GC.
- 4. Q: Who is responsible for removing the kitchen/bar equipment which is being replaced? A: The GC is responsible for removing all appropriate kitchen/bar equipment and salvaging pieces requested by owner. GC shall coordinate with kitchen vendor which pieces of kitchen/bar equipment to be salvaged/reused or removed prior to the start of demolition.
- 5. Q: Can temporary solutions be proposed for long lead time portions of the Phase 1 area in order to get it open on schedule? A: Yes, temporary and/or creative solutions may be proposed to meet the Phase 1 schedule deadline. Each solution which deviates from the contract drawings must be approved in writing by the owner prior to commencing work. The final build out must conform to the contract documents unless previously agreed to in writing by the owner.
- 6. Q: Is the existing brick sidewalk to be salvaged for re-use or is all new brick to be used? A: All new brick is to be used for the new sidewalks.
- 7. Q: Which Construction/Building permits have been applied for already and when? A: **The State Construction and Barrier Free Permit (including kitchen exhaust hood) was applied for on Wednesday 6/8/2016. The Portland General Building Permit and a Fast Track Interior Demolition permit were applied for on Friday 6/10/2016.**
- 8. Q: Will there be an opportunity for contractors and/or subs to come back to the building to look at particular items not seen during the Pre-Bid site walk? A: Yes, additional site visits will be allowed. All additional visits must be logged on the sign in sheet provided at the Asylum Sports Bar and must not interfere with hours of operation. The Sports Bar will be accessible from 9:30am to 11am and the remainder of the facility from 9:30am to 4pm. Please contact Valerie Levy at 207-232-4693 to be let in prior to 11am.
- 9. Q: There are many references to a Div. 28 Fire Alarm, but there is no Div. 28. or fire alarm specified in Div. 26. Please provide. Do we know the make of the existing system? A: Fire alarm and electronic security (Div. 28) work will be performed by Owner's current vendor, Cunningham Security. Cost for this work will be included in the contract as an allowance. Allowance will be clarified and specification for Div. 28 work will be provided in Addendum #2.

# **SPECIFICATION CHANGES:**

- 10. Section 055113, Metal Pan Stairs, DELETE in its entirety and REPLACE with attached section.
- 11. Section 084113, Aluminum-Framed Entrances and Storefronts, DELETE in its entirety and REPLACE with attached section.



- 12. Section 084413, Glazed Aluminum Curtain Walls, DELETE in its entirety and REPLACE with attached section.
- 13. Section 323119, Decorative Metal Fences and Gates, DELETE in its entirety and REPLACE with attached section.

# DRAWING CHANGES:

- 14. Sheet AE102B, First Floor Plan Segment B, DELETE and REPLACE with attached sheet.
- 15. Sheet AE114B, Balcony Reflected Ceiling Plan Segment B, DELETE and REPLACE with attached sheet.
- 16. Sheet AE205, Interior Elevations, DELETE and REPLACE with attached sheet.
- 17. Sheet AE206, Interior Elevations, DELETE and REPLACE with attached sheet.
- 18. Sheet AE401, Enlarged Restroom Plans & Elevations, DELETE and REPLACE with attached sheet.
- 19. Sheet AE402, Enlarged Restroom Plans & Elevations, DELETE and REPLACE with attached sheet.
- 20. Sheet AE403, Enlarged Restroom Plans & Elevations, DELETE and REPLACE with attached sheet.
- 21. Sheet AE404, Enlarged Restroom Plans & Elevations, DELETE and REPLACE with attached sheet.
- 22. Sheet AE513, Millwork Details, DELETE and REPLACE with attached sheet.
- 23. Sheet AE515, Stair 151 Sections & Plans, DELETE and REPLACE with attached sheet.
- 24. Sheet AE520, Stair Details, DELETE and REPLACE with attached sheet.
- 25. Sheet AE603, Partition Types and Typical Details, DELETE and REPLACE with attached sheet.
- 26. Sheet AE608, Typical Railing Types, DELETE and REPLACE with attached sheet.
- 27. Sheet EL104, Upper Balcony Lighting Plan, DELETE and REPLACE with attached sheet.
- 28. Sheet EP104, Upper Balcony Power Plan, DELETE and REPLACE with attached sheet.
- 29. Sheet CP101, Site Layout and Materials Plan, DELETE and REPLACE with attached sheet.

# END OF ADDENDUM

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Project: Asylum WBRC Project Number: 04071.10 Meeting Date/Time: 06/10/16 at 9:00 am

- 1. <u>Attendees</u>: Refer to sign-in sheet.
- 2. Introductions:
  - Owner: Tedlum Associates, LLC s/b/a The Asylum, Inc., 121 Center Street, Portland, Maine 04103
  - Owner Representative: Valerie Levy
  - WBRC Contact: Jocelyn Boothe, AIA, Project Manager
- 3. Obtain Drawings/Specifications:
  - Plans and Specifications may be obtained electronically, free of charge, From WBRC Architects Engineers by contacting Miranda Jones at miranda.jones@wbrcae.com
  - Printed bid documents may be obtained at a cost: Sets can be viewed, ordered and downloaded at: http://www.xpressplanroom.com/ Under the "Private Jobs" tab you will need to enter job key: <u>Asyl16 (</u>case sensitive).
- 4. <u>Scope of Work</u>: The Work involves the partial demolition (< 50%), expansion, and renovation of the 15,600 g.s.f Asylum event space (24,459 +/- s.f. when complete) with infill at the existing parking lot immediately adjacent to the current facility. The code classification is Assembly, and construction type is VB-V (000). Work includes but is not limited to, earthwork, site utilities and site improvements, paving, and landscaping. Work also includes demolition and shoring, concrete foundations and slab-on-grade, steel structure, steel joists and decking, roof membrane system over roof insulation, sheet metal, masonry, precast concrete architectural elements, metal stud partitions, insulation, gypsum board walls and ceilings, ceramic tile, acoustical ceilings, resilient flooring, acoustic wall treatment, carpeting, custom cabinets and fixtures, carpentry, glass storefront and curtain wall systems, painting, metal doors, wood doors, metal frames, door hardware, grilles, metal fabrications, toilet partitions and accessories, fixed seating, elevators, rigging equipment, audio visual equipment, signage, fire protection and detection systems, fireproofing, electrical, including replacement and upgrade of electrical service and generator, heating, ventilating, and air conditioning complete and ready for use, and other Work indicated in the Contract Documents. See also par. 1.6 for "work performed under separate contract.</p>
- Project Phasing Dates: It is the Owner's goal to occupy portions of the building during the three (3) phases of construction, and to enable final occupancy of each phase as soon as possible. BIDDER hereby agrees to commence WORK under this contract on or before a date to be specified in the NOTICE TO PROCEED, and to fully complete the PROJECT according to the following phase completion dates: (Refer to Section 011000 Summary)

Phase 1:	days (anticipated on or before Aug. 1, 2016)
Phase 2:	days (anticipated on or before Dec. 1, 2016)
Phase 3:	days (anticipated no later than February 28, 2017)

- 6. <u>Bids Due</u>: Bids will be opened privately at 2:00 pm on June 27, 2016. Bids received after this time will not be accepted.
- 7. <u>Bid Alternates</u>: *There are no alternates for this project.*



Project: Asylum WBRC Project Number: 04071.10 Meeting Date/Time: 06/10/16 at 9:00 am

# 8. Allowances:

Allowance No. 1: I	Excess or Incremental Soil Removal Costs	Dollars \$	50,000
Allowance No. 2: (	Civil/Site Testing & Inspection Allowance	Dollars \$	3,000
Allowance No. 3: I	Exterior Signage	Dollars \$	38,500
Allowance No. 4: I	Electrical Utility Costs	Dollars \$	75,000

# 9. Liquidated Damages:

The Contractor and the Contractor's surety, if any, shall be liable for and shall pay the Owner the sums hereinafter stipulated as liquidated damages, and not as a penalty, for each calendar day of delay after the date established for Phase 3 Completion in the Contract Documents until the Work is substantially complete: Two thousand, five hundred Dollars ( $\frac{2,500}{2}$ ) per calendar day.

The Owner shall pay as a bonus to the Contractor a sum of Two thousand, five hundred Dollars ( $\frac{2,500}{1000}$ ) for each calendar day preceding the date established for Phase 3 Completion in the Contract Documents that the Work is determined to be substantially complete by the Architect.

10. <u>Permits</u>: Refer to AIA Document A201, General Conditions of the Contract, with notice of the following exception as noted in Document 000800, Supplementary Conditions:

EXCEPTION: The following permit application and applicable fee have been paid by the Owner.

- 1. The Portland General Building Permit Application
- 2. The Portland Fast Track Interior Demolition Permit
- 3. State Fire Marshal Construction Permits
- 11. <u>Plan Holders List</u>: Available on request by email from WBRC Architects/Engineers, email miranda.jones@wbrcae.com
- <u>Clarification during bidding</u>: Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Architect no later than Thursday, June 16, 2016. Official changes to the Bid Documents will be issued by Addendum no later than Tuesday, June 21, 2016.
- 13. <u>Verbal discussions, information, and comments modifications to bid documents</u>: **Information included** in and discussed at the Pre-Bid Conference does <u>NOT</u> supersede any information contained in the Bid Documents. Official changes to the Bid Documents will be issued by Addendum only.
- 14. Questions & Tour.



BANGOR PORTLAND SARASOTA

# **PRE-BID MEETING AGENDA**

Project: Asylum WBRC Project Number: 04071.10 Meeting Date/Time: 06/10/16 at 9:00 am

ATTENDEES	Company / Affiliation	Telephone / e-mail
ChrisBellevue	Damon mech.	chellevue edynomiecharical can
SLOTT GARLAND	SPRINKLEP SYSTEMS INC.	Scotta esprinklessystemsinc. Lom
Brian Bradstreet	Custom Masonly Inc	bbradstreet cmi @gmail. Som
Garrett Gustafson	ES Bonlos Company	464-3706 GG-ustation & ESBoulos-com
KEN SPALDING	ABM MIECH L	992-9250 KSPALDING PABHMELHANKAL (ON
Brad Roy	Consigli	bray@consigli.com
CHAD CHANDLER	CONFIGLI	chandler @ consignition
LARY C.	Consigni	<i>21</i>
MIKE MATHIAL	HAHAVER PAROSCU.	mmathieuchahnelbrisco.
JOELAROSE	LANDRY / FREN CH	JLAROSE CLANOPY FRENCH, COM
BETAM ST. HUAINE	HTFA	BSTHILLAIRER HTFP. FIE
James Perz	Hahnel Bross	JPerzohahnelbrosco.com
PAN ALCORN	NorthecsT 5 PRay Fran	207-699-9448 AAU/CNE-SPRAY. Com
Ternis Utin De Greet	12an De Grauf Paintin	207 415 -6820 painter Elleiner Men
Brian Lever ce	AirTemp Irc.	774-2300 blevesen permetertextursus
Luke Dionne	Wright - Ryan	Idioune @ wright - Ryan. Com
Ryan Peters	Lakeside Concrete Cutty Inc	Takeside concrete cutting @ hotmail, com 7458137
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# SECTION 055113 - METAL PAN STAIRS - REPLACED ADDENDUM 1

# PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

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

# 1.2 SUMMARY

# A. Section Includes:

- 1. Preassembled steel stairs with concrete-filled and abrasive-coating-finished, formed-metal treads.
- 2. <u>Supplemental frame for shaft wall support in stair 151. See drawings and details.</u> <u>ADDENDUM 1</u>
- B. Related Requirements:
  - 1. Section 033000 "Cast-in-Place Concrete" for concrete fill for stair treads and platforms.
  - 2. Section 055213 "Pipe and Tube Railings" for pipe and tube railings.
  - 3. Section 096513 "Resilient Base and Accessories" for tread and nosing finish.
  - 4. Section 099123 "Interior Painting" for primer and paint.

# 1.3 COORDINATION

- A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.
- B. Coordinate installation of anchorages for metal stairs. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- C. Coordinate locations of hanger rods and struts with other work so that they do not encroach on required stair width and are within the fire-resistance-rated stair enclosure.

# 1.4 ACTION SUBMITTALS

- A. Product Data: For metal pan stairs.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.
- C. Delegated-Design Submittal: For stairs, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

D. Inspection Field Reports: The professional engineer responsible for the design shall schedule at least FOUR site visits and submit inspection field reports bearing his/her seal, including a final affidavit after the construction is complete and inspected stating that the Work is complete and is in accordance with all requirements. – ADDENDUM 1

# 1.5 INFORMATIONAL SUBMITTALS

- A. Welding certificates.
- B. Paint Compatibility Certificates: From manufacturers of topcoats applied over shop primers certifying that shop primers are compatible with topcoats.

# 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
  - 1. AWS D1.1/D1.1M, "Structural Welding Code Steel."

# PART 2 - PRODUCTS

# 2.1 MANUFACTURERS

- A. <u>Manufacturers</u>: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  - 1. <u>Alfab, Inc</u>.
  - 2. <u>American Stair, Inc</u>.
  - 3. Lapeyre Stair Inc.
  - 4. <u>Pacific Stair Corporation</u>.
  - 5. <u>Worthington Metal Fabricators</u>.

# 2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design stairs and railings.
- B. Structural Performance of Stairs: Metal stairs shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
  - 1. Uniform Load: 100 lbf/sq. ft.
  - 2. Concentrated Load: 300 lbf applied on an area of 4 sq. in.
  - 3. Uniform and concentrated loads need not be assumed to act concurrently.
  - 4. Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.
  - 5. Limit deflection of treads, platforms, and framing members to L/360 or 1/4 inch, whichever is less.

- C. Structural Performance of Railings: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
  - 1. Handrails and Top Rails of Guards:
    - a. Uniform load of 50 lbf/ft. applied in any direction.
    - b. Concentrated load of 200 lbf applied in any direction.
    - c. Uniform and concentrated loads need not be assumed to act concurrently.
  - 2. Infill of Guards:
    - a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft.
    - b. Infill load and other loads need not be assumed to act concurrently.
- D. Seismic Performance of Stairs: Metal stairs shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
  - 1. Component Importance Factor: 1.0.

# 2.3 METALS

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.
- B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.
- C. Steel Tubing: ASTM A 500 (cold formed).
- D. Uncoated, Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, either commercial steel, Type B, or structural steel, Grade 25, unless another grade is required by design loads; exposed.

# 2.4 FASTENERS

- A. General: Provide zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941, Class Fe/Zn 12 for exterior use, and Class Fe/Zn 5 where built into exterior walls. Select fasteners for type, grade, and class required.
- B. Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.
- C. Post-Installed Anchors: Torque-controlled expansion anchors capable of sustaining, without failure, a load equal to six times the load imposed when installed in unit masonry and four times the load imposed when installed in concrete, as determined by testing according to ASTM E 488/E 488M, conducted by a qualified independent testing agency.
  - 1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, unless otherwise indicated.
  - 2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 2 stainless-steel bolts, ASTM F 593, and nuts, ASTM F 594.

# 2.5 MISCELLANEOUS MATERIALS

- A. Shop Primers: Provide primers that comply with Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."
- B. Concrete Materials and Properties: Comply with requirements in Section 033000 "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.

# 2.6 FABRICATION, GENERAL

- A. Provide complete stair assemblies, including metal framing, hangers, struts, railings, clips, brackets, bearing plates, and other components necessary to support and anchor stairs and platforms on supporting structure.
  - 1. Join components by welding unless otherwise indicated.
  - 2. Use connections that maintain structural value of joined pieces.
- B. Preassembled Stairs: Assemble stairs in shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- E. Form exposed work with accurate angles and surfaces and straight edges.
- F. Weld connections to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. Weld exposed corners and seams continuously unless otherwise indicated.
  - 5. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 4 welds: good quality, uniform undressed weld with minimal splatter.
- G. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) screws or bolts unless otherwise indicated. Locate joints where least conspicuous.

# 2.7 STEEL-FRAMED STAIRS

A. NAAMM Stair Standard: Comply with "Recommended Voluntary Minimum Standards for Fixed Metal Stairs" in NAAMM AMP 510, "Metal Stairs Manual," Commercial Class, unless more stringent requirements are indicated.

- B. Stair Framing:
  - 1. Fabricate stringers of steel tubes .
    - a. Provide closures for exposed ends of steel tube stringers.
  - 2. Construct platforms of steel channel tube headers and miscellaneous framing members as needed to comply with performance requirements.
  - 3. Weld stringers to headers; weld framing members to stringers and headers. If using bolts, fabricate and join so bolts are not exposed on finished surfaces.
  - 4. Where stairs are enclosed by gypsum board shaftwall assemblies, provide hanger rods or struts to support landings from floor construction above or below. Locate hanger rods and struts where they do not encroach on required stair width and are within the fire-resistance-rated stair enclosure.
  - 5. Where masonry walls support metal stairs, provide temporary supporting struts designed for erecting steel stair components before installing masonry.
- C. Metal Pan Stairs: Form risers, subtread pans, and subplatforms to configurations shown from steel sheet of thickness needed to comply with performance requirement, but not less than 0.1046 inch.
  - 1. Steel Sheet: Uncoated cold -rolled steel sheet unless otherwise indicated.
  - 2. Directly weld metal pans to stringers; locate welds on top of subtreads where they are concealed by concrete fill. Do not weld risers to stringers.
  - 3. Shape metal pans to include nosing integral with riser.
  - 4. Provide subplatforms of configuration indicated or, if not indicated, the same as subtreads. Weld subplatforms to platform framing.
    - a. Smooth Soffit Construction: Construct subplatforms with flat metal under surfaces to produce smooth soffits.

# 2.8 STAIR RAILINGS

- A. Comply with applicable requirements in Section 055213 " Pipe and Tube Railings.
  - 1. Connect posts to stair framing by direct welding unless otherwise indicated.
- B. Welded Connections: Fabricate railings with welded connections. Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.
  - 1. Finish welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 1 welds: no evidence of a welded joint as shown in NAAMM AMP 521.
- C. Form changes in direction of railings as follows:
  - 1. As detailed.
- D. For changes in direction made by bending, use jigs to produce uniform curvature for each repetitive configuration required. Maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- E. Close exposed ends of railing members with prefabricated end fittings.

METAL PAN STAIRS	
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- F. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns unless clearance between end of rail and wall is 1/4 inch (6 mm) or less.
- G. Connect posts to stair framing by direct welding unless otherwise indicated.
- H. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, end closures, flanges, miscellaneous fittings, and anchors for interconnecting components and for attaching to other work. Furnish inserts and other anchorage devices for connecting to concrete or masonry work.
  - 1. For nongalvanized railings, provide nongalvanized ferrous-metal fittings, brackets, fasteners, and sleeves, except galvanize anchors embedded in exterior masonry and concrete construction.
  - 2. Provide type of bracket with flange tapped for concealed anchorage to threaded hanger bolt and that provides 2-1/4 inch clearance from inside face of handrail to finished wall surface.
- I. Fillers: Provide fillers made from steel plate, or other suitably crush-resistant material, where needed to transfer wall bracket loads through wall finishes to structural supports. Size fillers to suit wall finish thicknesses and to produce adequate bearing area to prevent bracket rotation and overstressing of substrate.

# 2.9 FINISHES

- A. Finish metal stairs after assembly.
- B. Apply shop primer to uncoated surfaces of metal stair components, except those with galvanized finishes and those to be embedded in concrete or masonry unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

# PART 3 - EXECUTION

# 3.1 INSTALLING METAL PAN STAIRS

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing metal stairs to in-place construction. Include threaded fasteners for concrete and masonry inserts, through-bolts, lag bolts, and other connectors.
- B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal stairs. Set units accurately in location, alignment, and elevation, measured from established lines and levels and free of rack.
- C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.
- D. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.
- E. Field Welding: Comply with requirements for welding in "Fabrication, General" Article.

F. Place and finish concrete fill for treads and platforms to comply with Section 033000 "Cast-in-Place Concrete."

# 3.2 INSTALLING RAILINGS

- A. Adjust railing systems before anchoring to ensure matching alignment at abutting joints. Space posts at spacing indicated or, if not indicated, as required by design loads. Plumb posts in each direction. Secure posts and rail ends to building construction as follows:
  - 1. Anchor posts to steel by welding to steel supporting members.
- B. Attach handrails to wall with wall brackets. Locate brackets as indicated or, if not indicated, at spacing required to support structural loads. Secure wall brackets to building construction as follows:
  - 1. For concrete and solid masonry anchorage, use drilled-in expansion shields and hanger or lag bolts.
  - 2. For hollow masonry anchorage, use toggle bolts.
  - 3. For steel-framed partitions, use hanger or lag bolts set into fire-retardant-treated wood backing between studs. Coordinate with stud installation to locate backing members.

# 3.3 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.
  - 1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.
- B. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."

END OF SECTION 055113

# SECTION 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS - REPLACED ADDENDUM 1

# PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

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

# 1.2 SUMMARY

- A. Section Includes:
  - 1. Exterior storefront framing.
  - 2. Storefront framing for punched openings.
  - 3. Exterior manual-swing entrance doors and door-frame units.

# 1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

# 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For aluminum-framed entrances and storefronts. Include plans, elevations, sections, full-size details, and attachments to other work.
  - 1. Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
  - 2. Include full-size isometric details of each vertical-to-horizontal intersection of aluminum-framed entrances and storefronts, showing the following:
    - a. Joinery, including concealed welds.
    - b. Anchorage.
    - c. Expansion provisions.
    - d. Glazing.
    - e. Flashing and drainage.
  - 3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
- C. Samples for Initial Selection: For units with factory-applied color finishes.

D. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.

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- E. Fabrication Sample: Of each vertical-to-horizontal intersection of assemblies, made from 12-inch lengths of full-size components and showing details of the following:
  - 1. Joinery, including concealed welds.
  - 2. Anchorage.
  - 3. Expansion provisions.
  - 4. Glazing.
  - 5. Flashing and drainage.
- F. Entrance Door Hardware Schedule: Prepared by or under supervision of supplier, detailing fabrication and assembly of entrance door hardware, as well as procedures and diagrams. Coordinate final entrance door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of entrance door hardware.
- G. Delegated-Design Submittal: For aluminum-framed entrances and storefronts indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

# 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Energy Performance Certificates: For aluminum-framed entrances and storefronts, accessories, and components, from manufacturer.
  - 1. Basis for Certification: NFRC-certified energy performance values for each aluminum-framed entrance and storefront.
- C. Product Test Reports: For aluminum-framed entrances and storefronts, for tests performed by manufacturer and witnessed by a qualified testing agency.

# 1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For aluminum-framed entrances and storefronts to include in maintenance manuals.

# 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
  - 1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

# 1.8 MOCKUPS

- A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
  - 1. Testing shall be performed on mockups according to requirements in "Field Quality Control" Article.
  - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
  - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

# 1.9 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including, but not limited to, excessive deflection.
    - b. Noise or vibration created by wind and thermal and structural movements.
    - c. Water penetration through fixed glazing and framing areas.
    - d. Failure of operating components.
  - 2. Warranty Period: Five years from date of Substantial Completion.
- B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Warranty Period: 205 years from date of Substantial Completion. ADDENDUM 1

# PART 2 - PRODUCTS

# 2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design aluminum-framed entrances and storefronts.
- B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

- 1. Aluminum-framed entrances and storefronts shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
- 2. Failure also includes the following:
  - a. Thermal stresses transferring to building structure.
  - b. Glass breakage.
  - c. Noise or vibration created by wind and thermal and structural movements.
  - d. Loosening or weakening of fasteners, attachments, and other components.
  - e. Failure of operating units.
- C. Structural Loads:
  - 1. Wind Loads: As indicated on Drawings.
  - 2. Other Design Loads: As indicated on Drawings.
- D. Deflection of Framing Members: At design wind pressure, as follows:
  - 1. Deflection Normal to Wall Plane: Limited to edge of glass in a direction perpendicular to glass plane not exceeding 1/175 of the glass edge length for each individual glazing lite or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.
  - 2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8 inch, whichever is smaller.
- E. Structural: Test according to ASTM E 330 as follows:
  - 1. When tested at positive and negative wind-load design pressures, assemblies do not evidence deflection exceeding specified limits.
  - 2. When tested at 150 percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
  - 3. Test Durations: As required by design wind velocity, but not less than 10 seconds.
- F. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:
  - 1. Fixed Framing and Glass Area:
    - a. Maximum air leakage of 0.06 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft..
  - 2. Entrance Doors:
    - a. Pair of Doors: Maximum air leakage of 1.0 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft..
    - b. Single Doors: Maximum air leakage of 0.5 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft..
- G. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:
  - 1. No evidence of water penetration through fixed glazing and framing areas when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft. .

- H. Seismic Performance: Aluminum-framed entrances and storefronts shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
- I. Energy Performance: Certify and label energy performance according to NFRC as follows:
  - 1. Thermal Transmittance (U-factor): Fixed glazing and framing areas shall have U-factor of not more than 0.57 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
  - 2. Solar Heat Gain Coefficient: Fixed glazing and framing areas shall have a solar heat gain coefficient of no greater than 0.40 as determined according to NFRC 200.
  - 3. Condensation Resistance: Fixed glazing and framing areas shall have an NFRC-certified condensation resistance rating of no less than 45 as determined according to NFRC 500.
- J. Thermal Movements: Allow for thermal movements resulting from ambient and surface temperature changes:
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
  - 2. Thermal Cycling: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested according to AAMA 501.5.
    - a. High Exterior Ambient-Air Temperature: That which produces an exterior metal-surface temperature of 180 deg F.
    - b. Low Exterior Ambient-Air Temperature: 0 deg F.
    - c. Interior Ambient-Air Temperature: 75 deg F.

# 2.2 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Kawneer TriFab VG 451T Framing System with mullion extensions or comparable product by one of the following:
  - 1. Arcadia, Inc.
  - 2. EFCO Corporation.
  - 3. Tubelite.
  - 4. YKK AP America Inc.
- B. Source Limitations: Obtain all components of aluminum-framed entrance and storefront system, including framing and accessories, from single manufacturer.

# 2.3 FRAMING

- A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
  - 1. Construction: Thermally broken.
  - 2. Glazing System: Retained mechanically with gaskets on four sides.
  - 3. <u>Finish: High-performance-organic finish-</u> Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker. – ADDENDUM 1
  - 4. Fabrication Method: Field-fabricated stick system.
- B. Backer Plates: Manufacturer's standard, continuous backer plates for framing members, if not integral, where framing abuts adjacent construction.

- C. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.
- D. Materials:
  - 1. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
    - a. Sheet and Plate: ASTM B 209.
    - b. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
    - c. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
    - d. Structural Profiles: ASTM B 308/B 308M.
  - 2. Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM, and prepare surfaces according to applicable SSPC standard.
    - a. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
    - b. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
    - c. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

# 2.4 ENTRANCE DOOR SYSTEMS

- A. Entrance Doors: Manufacturer's standard glazed entrance doors for manual-swing operation.
  - 1. Door Construction: 2-inch overall thickness, with minimum 0.188-inch- thick, extruded-aluminum tubular rail and stile members. Mechanically fasten corners with reinforcing brackets that are deeply penetrated and fillet welded or that incorporate concealed tie rods.
    - a. Thermal Construction: High-performance plastic connectors separate aluminum members exposed to the exterior from members exposed to the interior.
  - 2. Door Design: Medium stile; 3 inch nominal width, 10" high bottom rail.
  - 3. Glazing Stops and Gaskets: Square, snap-on, extruded-aluminum stops and preformed gaskets.
    - a. Provide nonremovable glazing stops on outside of door.

#### 2.5 ENTRANCE DOOR HARDWARE

- A. Entrance Door Hardware: Hardware not specified in this Section is specified in Section 087100 "Door Hardware."
  - 1. Opening-Force Requirements:
    - a. Egress Doors: Not more than 15 lbf to release the latch and not more than 30 lbf to set the door in motion and not more than 15 lbf to open the door to its minimum required width.

B. Thresholds: BHMA A156.21, raised thresholds beveled with a slope of not more than 1:2, with maximum height of 1/2 inch.

# 2.6 GLAZING

- A. Glazing: Comply with Section 088000 "Glazing."
- B. Glazing Gaskets: Manufacturer's standard sealed-corner pressure-glazing system of black, resilient elastomeric glazing gaskets, setting blocks, and shims or spacers. Comply with Section 088000 "Glazing."

# 2.7 ACCESSORIES

- A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
  - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
  - 2. Reinforce members as required to receive fastener threads.
- B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
- C. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.
- D. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-milthickness per coat.

# 2.8 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Fabricate components that, when assembled, have the following characteristics:
  - 1. Profiles that are sharp, straight, and free of defects or deformations.
  - 2. Accurately fitted joints with ends coped or mitered.
  - 3. Physical and thermal isolation of glazing from framing members.
  - 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
  - 5. Provisions for field replacement of glazing from exterior.
  - 6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.
- C. Mechanically Glazed Framing Members: Fabricate for flush glazing without projecting stops.
- D. Storefront Framing: Fabricate components for assembly using shear-block system.
- E. Entrance Door Frames: Reinforce as required to support loads imposed by door operation and for installing entrance door hardware.

- 1. At exterior doors, provide compression weather stripping at fixed stops.
- F. Entrance Doors: Reinforce doors as required for installing entrance door hardware.
  - 1. At pairs of exterior doors, provide sliding-type weather stripping retained in adjustable strip and mortised into door edge.
  - 2. At exterior doors, provide weather sweeps applied to door bottoms.
- G. Entrance Door Hardware Installation: Factory install entrance door hardware to the greatest extent possible. Cut, drill, and tap for factory-installed entrance door hardware before applying finishes.
- H. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

# 2.9 ALUMINUM FINISHES

- A. Finish on Framing and Entrances:
  - 1. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.

# 2.10 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

# 2.11 INSTALLATION

- A. General:
  - 1. Comply with manufacturer's written instructions.
  - 2. Do not install damaged components.
  - 3. Fit joints to produce hairline joints free of burrs and distortion.
  - 4. Rigidly secure nonmovement joints.
  - 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
  - 6. Seal perimeter and other joints watertight unless otherwise indicated.
- B. Metal Protection:
  - 1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
  - 2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- C. Set continuous sill members and flashing in full sealant bed as specified in Section 079200 "Joint Sealants" to produce weathertight installation.

- D. Install components plumb and true in alignment with established lines and grades.
- E. Install glazing as specified in Section 088000 "Glazing."
- F. Entrance Doors: Install doors to produce smooth operation and tight fit at contact points.
  - 1. Exterior Doors: Install to produce weathertight enclosure and tight fit at weather stripping.
  - 2. Field-Installed Entrance Door Hardware: Install surface-mounted entrance door hardware according to entrance door hardware manufacturers' written instructions using concealed fasteners to greatest extent possible.

# 2.12 ERECTION TOLERANCES

- A. Erection Tolerances: Install aluminum-framed entrances and storefronts to comply with the following maximum tolerances:
  - 1. Plumb: 1/8 inch in 10 feet; 1/4 inch in 40 feet.
  - 2. Level: 1/8 inch in 20 feet; 1/4 inch in 40 feet.
  - 3. Alignment:
    - a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch wide, limit offset from true alignment to 1/16 inch.
    - b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch wide, limit offset from true alignment to 1/8 inch.
    - c. Where surfaces are separated by reveal or protruding element of 1 inch wide or more, limit offset from true alignment to 1/4 inch.
  - 4. Location: Limit variation from plane to 1/8 inch in 12 feet; 1/2 inch over total length.

# 2.13 FIELD QUALITY CONTROL

- A. Testing Agency: Engage a qualified testing agency to perform tests and inspections.
- B. Field Quality-Control Testing: Perform the following test on representative areas of aluminum-framed entrances and storefronts.
  - 1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect shall be tested according to AAMA 501.2 and shall not evidence water penetration.
    - a. Perform a minimum of two tests in areas as directed by Architect.
    - b. Perform tests in each test area as directed by Architect. Perform at least three tests, prior to 10, 35, and 70 percent completion.
- C. Aluminum-framed entrances and storefronts will be considered defective if they do not pass tests and inspections.
- D. Prepare test and inspection reports.

# 2.14 MAINTENANCE SERVICE

- A. Entrance Door Hardware:
  - 1. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of entrance door hardware.
  - 2. Initial Maintenance Service: Beginning at Substantial Completion, provide six months' full maintenance by skilled employees of entrance door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper entrance door hardware operation at rated speed and capacity. Use parts and supplies that are the same as those used in the manufacture and installation of original equipment.

END OF SECTION 084113

# SECTION 084413 - GLAZED ALUMINUM CURTAIN WALLS - REPLACED ADDENDUM 1

# PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

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

# 1.2 SUMMARY

A. Section includes glazed aluminum curtain walls.

# 1.3 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

# 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
  - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For glazed aluminum curtain walls. Include plans, elevations, sections, full-size details, and attachments to other work.
  - 1. Include details of provisions for assembly expansion and contraction and for draining moisture occurring within the assembly to the exterior.
  - 2. Include full-size isometric details of each vertical-to-horizontal intersection of glazed aluminum curtain walls, showing the following:
    - a. Joinery, including concealed welds.
    - b. Anchorage.
    - c. Expansion provisions.
    - d. Glazing.
    - e. Flashing and drainage.
  - 3. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
- C. Samples for Initial Selection: For units with factory-applied color finishes.
- D. Samples for Verification: For each type of exposed finish required, in manufacturer's standard sizes.
- E. Fabrication Sample: Of each vertical-to-horizontal intersection of assemblies, made from 12-inch lengths of full-size components and showing details of the following:

- 1. Joinery, including concealed welds.
- 2. Anchorage.
- 3. Expansion provisions.
- 4. Glazing.
- 5. Flashing and drainage.
- F. Delegated-Design Submittal: For glazed aluminum curtain walls indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

# 1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Energy Performance Certificates: For glazed aluminum curtain walls, accessories, and components from manufacturer.
  - 1. Basis for Certification: NFRC-certified energy performance values for each glazed aluminum curtain wall.
- C. Product Test Reports: For glazed aluminum curtain walls, for tests performed by manufacturer and witnessed by a qualified testing agency.
- D. Source quality-control reports.
- E. Field quality-control reports.

# 1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For glazed aluminum curtain walls to include in maintenance manuals.

# 1.7 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
  - 1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

## 1.8 WARRANTY

- A. Special Assembly Warranty: Manufacturer agrees to repair or replace components of glazed aluminum curtain wall that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including, but not limited to, excessive deflection.
    - b. Noise or vibration created by wind and thermal and structural movements.
    - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
    - d. Water penetration through fixed glazing and framing areas.
  - 2. Warranty Period: 10 years from date of Substantial Completion.
- B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
  - 1. Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  - 2. Warranty Period: <u>10 5 years</u> from date of Substantial Completion. <u>ADDENDUM 1</u>

# PART 2 - PRODUCTS

# 2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design glazed aluminum curtain walls.
- B. General Performance: Comply with performance requirements specified, as determined by testing of glazed aluminum curtain walls representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
  - 1. Glazed aluminum curtain walls shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
  - 2. Failure also includes the following:
    - a. Thermal stresses transferring to building structure.
    - b. Glass breakage.
    - c. Noise or vibration created by wind and thermal and structural movements.
    - d. Loosening or weakening of fasteners, attachments, and other components.
- C. Structural Loads:
  - 1. Wind Loads: As indicated on Drawings.

GLAZED ALUMINUM CURTAIN WALLS

- 2. Other Design Loads: As indicated on Drawings.
- D. Deflection of Framing Members: At design wind pressure, as follows:
  - 1. Deflection Normal to Wall Plane: Limited to 1/175 of clear span for spans up to 13 feet 6 inches and to 1/240 of clear span plus 1/4 inch for spans greater than 13 feet 6 inches or an amount that restricts edge deflection of individual glazing lites to 3/4 inch, whichever is less.
  - 2. Deflection Parallel to Glazing Plane: Limited to 1/360 of clear span or 1/8 inch, whichever is smaller.
- E. Structural: Test according to ASTM E 330 as follows:
  - 1. When tested at positive and negative wind-load design pressures, assemblies do not evidence deflection exceeding specified limits.
  - 2. When tested at 150 percent of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, or permanent deformation of main framing members exceeding 0.2 percent of span.
  - 3. Test Durations: As required by design wind velocity, but not less than 10 seconds.
- F. Air Infiltration: Test according to ASTM E 283 for infiltration as follows:
  - 1. Fixed Framing and Glass Area:
    - a. Maximum air leakage of 0.06 cfm/sq. ft. at a static-air-pressure differential of 1.57 lbf/sq. ft..
- G. Water Penetration under Static Pressure: Test according to ASTM E 331 as follows:
  - 1. No evidence of water penetration through fixed glazing and framing areas when tested according to a minimum static-air-pressure differential of 20 percent of positive wind-load design pressure, but not less than 6.24 lbf/sq. ft. .
- H. Interstory Drift: Accommodate design displacement of adjacent stories indicated.
  - 1. Design Displacement: As indicated on Drawings.
  - 2. Test Performance: Complying with criteria for passing based on building occupancy type when tested according to AAMA 501.4 at design displacement and 1.5 times the design displacement.
- I. Energy Performance: Certify and label energy performance according to NFRC as follows:
  - 1. Thermal Transmittance (U-factor): Fixed glazing and framing areas shall have U-factor of not more than 0.33 Btu/sq. ft. x h x deg F as determined according to NFRC 100.
  - 2. Solar Heat Gain Coefficient: Fixed glazing and framing areas shall have a solar heat gain coefficient of no greater than 0.40 as determined according to NFRC 200.
  - 3. Condensation Resistance: Fixed glazing and framing areas shall have an NFRC-certified condensation resistance rating of no less than 70 as determined according to NFRC 500.
- J. Noise Reduction: Test according to ASTM E 90, with ratings determined by ASTM E 1332, as follows:
  - 1. Outdoor-Indoor Transmission Class: Minimum 26.

# 2.2 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Kawneer 1600 UT ultra thermal curtain wall system or comparable product by one of the following:
  - 1. EFCO Corporation.
  - 2. Shuco USA LP.
  - 3. Tubelite.
  - 4. Trulite Glass & Aluminum Solutions, LLC.
  - 5. Wausau Window and Wall Systems; Apogee Wausau Group.
  - 6. YKK AP America Inc.
- B. Source Limitations: Obtain all components of curtain wall system, including framing entrances and accessories, from single manufacturer.

# 2.3 FRAMING

- A. Framing Members: Manufacturer's extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads.
  - 1. Construction: Thermally broken.
  - 2. Glazing System: Retained mechanically with gaskets on four sides.
  - 3. Glazing Plane: Front.
  - 4. Finish: High-performance organic finish.
  - 5. Fabrication Method: Field-fabricated stick system.
- B. Pressure Caps: Manufacturer's standard aluminum components that mechanically retain glazing.
  - 1. Include snap-on aluminum trim that conceals fasteners.
- C. Mullion Extensions: Kawneer Extrusion # 815-699/P. Plate 162-358/ Siteline= 2.5 inches and depth= 9.75 inches.
  - 1. Color: Match Panel MP2 Paint System; Provide sample for Architect's approval.
- D. Brackets and Reinforcements: Manufacturer's standard high-strength aluminum with nonstaining, nonferrous shims for aligning system components.
- E. Materials:
  - 1. Aluminum: Alloy and temper recommended by manufacturer for type of use and finish indicated.
    - a. Sheet and Plate: ASTM B 209.
    - b. Extruded Bars, Rods, Profiles, and Tubes: ASTM B 221.
    - c. Extruded Structural Pipe and Tubes: ASTM B 429/B 429M.
    - d. Structural Profiles: ASTM B 308/B 308M.
  - 2. Steel Reinforcement: Manufacturer's standard zinc-rich, corrosion-resistant primer complying with SSPC-PS Guide No. 12.00; applied immediately after surface preparation and pretreatment. Select surface preparation methods according to recommendations in SSPC-SP COM, and prepare surfaces according to applicable SSPC standard.

- a. Structural Shapes, Plates, and Bars: ASTM A 36/A 36M.
- b. Cold-Rolled Sheet and Strip: ASTM A 1008/A 1008M.
- c. Hot-Rolled Sheet and Strip: ASTM A 1011/A 1011M.

# 2.4 ENTRANCES

A. Entrances: Comply with Section 084113 "Aluminum-Framed Entrances and Storefronts."

# 2.5 GLAZING

A. Glazing: Comply with Section 088000 "Glazing."

# 2.6 ACCESSORIES

- A. Fasteners and Accessories: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding fasteners and accessories compatible with adjacent materials.
  - 1. Use self-locking devices where fasteners are subject to loosening or turning out from thermal and structural movements, wind loads, or vibration.
  - 2. Reinforce members as required to receive fastener threads.
  - 3. Use exposed fasteners with countersunk Phillips screw heads, finished to match framing system.
- B. Anchors: Three-way adjustable anchors with minimum adjustment of 1 inch that accommodate fabrication and installation tolerances in material and finish compatible with adjoining materials and recommended by manufacturer.
  - 1. Concrete and Masonry Inserts: Hot-dip galvanized cast-iron, malleable-iron, or steel inserts complying with ASTM A 123/A 123M or ASTM A 153/A 153M requirements.
- C. Concealed Flashing: Manufacturer's standard corrosion-resistant, nonstaining, nonbleeding flashing compatible with adjacent materials.
- D. Bituminous Paint: Cold-applied asphalt-mastic paint complying with SSPC-Paint 12 requirements except containing no asbestos, formulated for 30-mil thickness per coat.

# 2.7 FABRICATION

- A. Form or extrude aluminum shapes before finishing.
- B. Fabricate components that, when assembled, have the following characteristics:
  - 1. Profiles that are sharp, straight, and free of defects or deformations.
  - 2. Accurately fitted joints with ends coped or mitered.
  - 3. Physical and thermal isolation of glazing from framing members.
  - 4. Accommodations for thermal and mechanical movements of glazing and framing to maintain required glazing edge clearances.
  - 5. Provisions for field replacement of glazing from exterior.
  - 6. Fasteners, anchors, and connection devices that are concealed from view to greatest extent possible.

- C. Fabricate components to resist water penetration as follows:
  - 1. Internal guttering system or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.
- D. Curtain-Wall Framing: Fabricate components for assembly using manufacturer's standard assembly method.
- E. After fabrication, clearly mark components to identify their locations in Project according to Shop Drawings.

# 2.8 ALUMINUM FINISHES

- A. Finish on Typical Framing:
  - 1. Clear Anodic Finish: AAMA 611, AA-M12C22A41, Class I, 0.018 mm or thicker.
- B. Finish on Mullion Extensions:
  - 1. High-Performance Organic Finish: Three-coat fluoropolymer finish complying with AAMA 2605 and containing not less than 70 percent PVDF or FEVE resin by weight in both color coat and clear topcoat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
    - a. Color and Gloss: Match Architect's sample.

# PART 3 - EXECUTION

# 3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.2 INSTALLATION

- A. General:
  - 1. Comply with manufacturer's written instructions.
  - 2. Do not install damaged components.
  - 3. Fit joints to produce hairline joints free of burrs and distortion.
  - 4. Rigidly secure nonmovement joints.
  - 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
  - 6. Seal joints watertight unless otherwise indicated.
- B. Metal Protection:

GLAZED ALUMINUM CURTAIN WALLS

- 1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with primer, applying sealant or tape, or installing nonconductive spacers as recommended by manufacturer for this purpose.
- 2. Where aluminum is in contact concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- C. Install components to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior.
- D. Install components plumb and true in alignment with established lines and grades.
- E. Install glazing as specified in Section 088000 "Glazing."

# 3.3 ERECTION TOLERANCES

- A. Erection Tolerances: Install glazed aluminum curtain walls to comply with the following maximum tolerances:
  - 1. Plumb: 1/8 inch in 10 feet; 1/4 inch in 40 feet.
  - 2. Level: 1/8 inch in 20 feet; 1/4 inch in 40 feet.
  - 3. Alignment:
    - a. Where surfaces abut in line or are separated by reveal or protruding element up to 1/2 inch wide, limit offset from true alignment to 1/16 inch.
    - b. Where surfaces are separated by reveal or protruding element from 1/2 to 1 inch wide, limit offset from true alignment to 1/8 inch.
    - c. Where surfaces are separated by reveal or protruding element of 1 inch wide or more, limit offset from true alignment to 1/4 inch.
  - 4. Location: Limit variation from plane to 1/8 inch in 12 feet; 1/2 inch over total length.

# 3.4 FIELD QUALITY CONTROL

- A. Test Area: Perform tests on representative areas of glazed aluminum curtain walls.
  - 1. Water-Spray Test: Before installation of interior finishes has begun, areas designated by Architect shall be tested according to AAMA 501.2 and shall not evidence water penetration.
    - a. Perform a minimum of two tests in areas as directed by Architect.
- B. Glazed aluminum curtain walls will be considered defective if they do not pass tests and inspections.
- C. Prepare test and inspection reports.

END OF SECTION 084413

# SECTION 323119 - DECORATIVE METAL FENCES AND GATES - REPLACED ADDENDUM 1

# PART 1 - GENERAL

# 1.1 RELATED DOCUMENTS

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

# 1.2 SUMMARY

- A. Section Includes:
  - 1. Decorative aluminum fences and railings.
- B. Related Sections:
  - 1. Division 03 Section "Cast-in-Place Concrete" for concrete.
  - 2. Division 31 Section "Earth Moving" for site excavation, fill, and backfill where decorative metal fences and gates are located.

# 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For gates. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each fence material and for each color specified.
  - 1. Provide Samples 12 inches in length for linear materials.
  - 2. Provide Samples 12 inches square for sheet or plate materials.
- D. Maintenance Data: For gate operators to include in maintenance manuals.

# 1.4 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

# PART 2 - PRODUCTS

# 2.1 ALUMINUM

A. Aluminum, General: Provide alloys and tempers with not less than the strength and durability properties of alloy and temper designated in paragraphs below for each aluminum form required.

- B. Extrusions: ASTM B 221, Alloy 6063-T5.
- C. Tubing: ASTM B 429, Alloy 6063-T6.
- D. Plate and Sheet: ASTM B 209, Alloy 6061-T6.
- E. Die and Hand Forgings: ASTM B 247, Alloy 6061-T6.

# 2.2 DECORATIVE ALUMINUM FENCES

- A. Decorative Aluminum Fences: Fences made from aluminum extrusions.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Ameristar Fence Products. ECHELON II MAJESTIC 3 RAIL
    - b. <u>Provide manufacturer-installed plate to mount panic bar hardware on interior side of</u> gate. Coordinate design with fence manufacturer and gate hardware provider.
    - <mark>c. <u>Provide manufacturer-installed mesh on gates to prevent access from exterior to interior</u> exit device hardware - ADDENDUM 1</mark>
- B. Fasteners: Manufacturer's standard concealed fastening system.
- C. Fabrication: Assemble fences into sections by fastening pickets to rails.
- D. Finish: Baked enamel or powder coating.

# E. <u>Gate Hardware</u>

- 1. <u>Provide weatherized keyed lever on outside trim and "panic bar" exit device on inside trim of gate. Provide self-closing hinges for single gate arrangement. Coordinate product selection with fence manufacturer. Color shall be painted black to match gate color.</u>
  - <u>Manufacturers: Subject to compliance with requirements, provide products by one of the</u> <u>following:</u>
    - <mark>a. <u>Detex Advantex</u></mark>
    - b. <u>Or as approved by Architect ADDENDUM 1</u>

# 2.3 ALUMINUM FINISHES

- A. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 2 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
  - 1. Color and Gloss: Black, Glossy.

# PART 3 - EXECUTION

# 3.1 EXAMINATION

DECORATIVE METAL FENCES AND GATES

- A. Examine areas and conditions, with Installer present, for compliance with requirements for site clearing, earthwork, pavement work, construction layout, and other conditions affecting performance of the Work.
- B. Do not begin installation before final grading is completed unless otherwise permitted by Architect.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

# 3.2 PREPARATION

- A. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.
  - 1. Construction layout and field engineering are specified in Division 01 Section "Execution"

# 3.3 DECORATIVE FENCE INSTALLATION

- A. Install fences according to manufacturer's written instructions.
- B. Post Excavation: Install in concrete footing or sleeve it system (for top of wall applications) as indicated on drawings..
- C. Post Setting: Set posts in concrete at indicated spacing into firm, undisturbed soil.
  - 1. Verify that posts are set plumb, aligned, and at correct height and spacing, and hold in position during setting with concrete or mechanical devices.
  - 2. Concrete Fill: Place concrete around posts and sleeves and vibrate or tamp for consolidation. Protect aboveground portion of posts from concrete splatter.
    - a. Exposed Concrete: Extend 2 inches above grade. Finish and slope top surface to drain water away from post.
    - b. Concealed Concrete: Top below grade as indicated on Drawings to allow covering with surface material. Slope top surface of concrete to drain water away from post.
  - 3. Posts Set in Concrete: Extend post to within 6 inches of specified excavation depth, but not closer than 3 inches to bottom of concrete.
  - 4. Posts Set into Concrete in Sleeves: Use galvanized-steel pipe sleeves with inside diameter at least 3/4 inch larger than outside diagonal dimension of post, preset and anchored into concrete for installing posts.
    - a. Extend posts at least 5 inches into sleeve.
    - b. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink grout, mixed and placed to comply with grout manufacturer's written instructions; shape and smooth to shed water. Finish and slope top surface of grout to drain water away from post.
  - 5. Space posts uniformly at 6 feet o.c.

# 3.4 GATE INSTALLATION

A. Install gates according to manufacturer's written instructions, level, plumb, and secure for full opening without interference. Attach hardware using tamper-resistant or concealed means. Install ground-set items in concrete for anchorage. Adjust hardware for smooth operation and lubricate where necessary.

END OF SECTION 323119



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		WALL LEGEND:	<u>GENERAL NOTES:</u> 1. ALL WALL PARTITION TYPES ARE <u>M4</u> UNLESS NOTED OTHERWISE. SEE SHEET AE603 & AE604 FOR PARTITION TYPES.
		EXISTING WALL TO REMAIN	2. REFER TO GI002 SHEET FOR ALL ABBREVIATIONS AND SYMBOLS.
	- <sub>EN</sub> \ (A)		3. REFER TO ALL DRAWINGS INCLUDING ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND SYMBOLS
	A.2		4. VERIFY ALL EQUIPMENT OPENINGS & RECOMMENDATIONS. LOCATION AND SIZES SHOWN ARE FOR INTENT PURPOSES ONLY. ADJUST ROUGH OPENINGS AND LOCATIONS AS REQUIRED PER ACTUAL EQUIPMENT.
	A10 AE307		5. G.C. TO PROVIDE & INSTALL ALL IN-WALL OR IN- CEILING BLOCKING / BRACING AS REQUIRED FOR ALL MILLWORK ITEMS, EQUIPMENT, SHELVING, AND ACCESSORIES WHETHER ITEMS ARE BY G.C. OR OTHERS COORDINATE WITH OWNER
	-4 		6. G.C. SHALL BE RESPONSIBLE FOR LAYING OUT THE SPACE PRIOR TO COMMENCING WORK AND SHALL NOTIFY THE ARCHITECT AND OWNER OF ANY DISCREPANCIES.
H1 501		KEYNOTES:         F7       TOP HUNG, SLIDING GLASS WALL	7. ALL CONCRETE MASONRY UNITS AND MORTAR TO INCLUDE AN INTEGRAL WATER REPELLENT
		F15 RECESSED CABLE MANAGEMENT ELECTRICAL TRENCH, SEE ELECTRICAL F24 METAL SHELVING, CS/CI	8. ALL EXTERIOR DIMENSIONS ARE TO FACE STUD AND / OR FACE OF FOUNDATION AND MASONRY UNLESS SPECIFICALLY NOTED OTHERWISE.
E502		F25 INFILL WALL TO MATCH ADJACENT CONSTRUCTION F32 DOOR TO BE AS TIGHT TO WALL AS	9. ALL INTERIOR DIMENSIONS SHOWN ARE TO FACE OF FRAMING UNLESS SPECIFICALLY NOTED OTHERWISE
EX6		F32       POSSIBLE         F33       EXPANSION JOINT         F34       ALIGN GWB FURRING WITH CURTAINWALL         JAMB         F35       STAGE EDGE LIP, SEE DETAILS         F38       ACCESSIBLE SEATING LOCATION, ATTACH         SIGN TO FACE OF DRINK RAIL. SIGN TO BE         CONDINATED WITH INTERIOR SIGN TO F	10. REFER TO SHEET GI003-005 FOR CODE COMPLIANCE PLAN, CODE REFERENCE INFORMATION AND FIRE RATED PARTITIONS AND SPACES. ALL MECHANICAL, ELECTRICAL, SPRINKLER AND PLUMBING PENETRATIONS THROUGH FIRE RATED CONSTRUCTION SHALL BE SLEEVED, FIRE SAFED AND / OR HAVE FIRE DAMPERS EQUIVALENT TO THE HOURLY FIRE RATING OF THE CONSTRUCTION.
	<u>A5</u> AE307	COORDINATED WITH INTERIOR SIGNAGE VENDOR F39 ACCESSIBLE SEATING LOCATION, ATTACH SIGN TO SIDE OF STAGE. SIGN TO BE COORDINATED WITH INTERIOR SIGNAGE VENDOR	11. ALL DRAWINGS ARE OF EQUAL IMPORTANCE IN DEFINING THE WORK OF THE CONTRACT DOCUMENTS. CONTRACTORS SHALL REVIEW ALL DRAWINGS BEFORE THE INSTALLATION OF THEIR WORK. SHOULD THERE BE A DISCREPANCY WITHIN AND BETWEEN THE DRAWINGS THAT WOULD CAUSE AN AWKWARD OR IMPROPER INSTALLATION NOTIFY ARCHITECT FOR CLARIFICATION PRIOR TO INSTALLATION OF SAID WORK. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS, SHALL BE CORRECTED BY CONTRACTOR AT THEIR EXPENSE AND AT NO
	29' - 2'		ADDITIONAL COST TO THE OWNER OR ARCHITECT. 12. DO NOT SCALE DRAWINGS, THE DRAWINGS ARE NOT NECESSARILY TO SCALE - USE GIVEN DIMENSIONS. CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE JOB SITE PRIOR TO THE START OF CONSTRUCTION. IF DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT FOR CLARIFICATION BEFORE COMMENCING THE WORK.
A1 AE607	)		13. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE SHOWN. WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED CONSULT ARCHITECT BEFORE PROCEEDING WITH THE WORK.
			14. ALL PITCHED FLOOR AREAS SHOWN WITH PITCH LINES SHALL SLOPE AT 1/4" PER FOOT UNLESS OTHERWISE NOTED, PROVIDE A SLAB DEPRESSION AT ALL FLOOR DRAINS WHERE PITCH LINES ARE NOT SHOWN ON PLAN.
			<ul> <li>15. FINISH FLOOR ELEVATIONS ARE TO TOP OF CONCRETE, UNLESS OTHERWISE NOTED.</li> <li>16. INSTALL ALL RECESSED CABINETS, PANELS, BOXES LOCATED IN FIRE-RATED PARTITIONS TO MAINTAIN THE FIRE-RATED CONSTRUCTION</li> </ul>
			17. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS AND MANUFACTURES TEMPLATE DRAWINGS FOR ALL MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, BOLT SETTING TEMPLATES, ISOLATIONS, SPRING ISOLATION, ETC. NOT SHOWN ON THE DRAWINGS
A1 AE60			18. OWNER FURNISHED ITEMS THE G.C. SHALL COORDINATE AND PROVIDE ELECTRICAL, PLUMBING, AND MECHANICAL CONNECTIONS FOR ALL EQUIPMENT.
			1ADDENDUM NUMBER 113 JUNE 20160ISSUED FOR CONSTRUCTION06 JUNE 2016REV.DESCRIPTIONDATE
	- A11 AE305 8		PROJECT NORTH
AE5			ARCHITECTS ENGINEERS WWW.WBRCAE.COM BANGOR, MAINE 207-947-4511 PORTLAND, MAINE 207-828-4511 SARASOTA, FLORIDA 941-556-0757 ASYLUM
_		<u>KEYPLAN</u>	
			SHEET TITLE:
		AB	vvBHC GAD FILE: C:Usersijocelyn.boothelDocumentsi407110 - ASYLUM DANCE CLUB - ARCH_locelyn.boothe.rvt       PROJECT No. 4071.10         GRAPHIC SCALE:
			SCALE: As indicated         PROJECT MANAGER: JRB         DRAWN BY: JRB         CHECKED BY: JET/MEJ
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