

SECTION 08410 – ALUMINUM ENTRANCES, STOREFRONT & WINDOW FRAMING

Scope:

1. Provide aluminum entrances and glazing:
 - a. Front exterior entry doors and frames.
 - b. Vestibule entry doors and frames matching front exterior entrance doors.
 - c. Side corridor and entry doors and frames matching front exterior entrance doors.
 - d. Preformed flashings as indicated on the drawings.

Product:

1. Door Type:
 - a. See drawing
2. Glazing
 - a. see energy report
3. Hardware: hinges, concealed closers, stops, keyed cylinders, push/pull, panic hardware with pulls (all exterior doors) as per manufacturer's standard line. Satin chrome finish.
4. Sealant: For sealants required within fabricated storefront system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.

Installation:

1. Comply with Drawings and manufacturer's written instructions for installing aluminum framed storefront system, accessories, and other components.
2. Anchor securely in place, install plumb, level and in true alignment. Isolate dissimilar metals to prevent corrosion.
3. Coordinate with glass and glazing work, install hardware and adjust for smooth, proper operation.

**Section 092400
Portland Cement Plastering (Stucco)**

PART 1 – GENERAL

1.10 **SUMMARY**

general

A. Specification provides requirements for the applications of a Stucco System, including information pertaining to the design, materials and application of Stucco

1.20 **ENVIRONMENTAL CONDITIONS**

A. Cold Weather Conditions:

1. Do not apply cement plaster when ambient temperature is less than 35°F (2°C).
2. Do not apply cement plaster to any frozen surfaces or surfaces containing frost. Protect plaster coats against freezing for a period of 24 hours after application.
3. Do not use frozen materials.
4. Tinting, heat and ventilation must be provided if cement plastering is done in a temperature below 35°F (2°C).

B. Warm Weather Conditions:

1. Protect the basecoats and finish coat of cement plaster from uneven and excessive evaporation in warm, windy weather. (Refer to section on curing in PART III)
2. Moist curing of cement based plaster is required.

PART 2 – PRODUCTS

2.10 **MOISTURE BARRIER**

A. Water-resistant paper – Federal Specification UU-B-790a, grade D30-minute or 60-minute

2.15 **WINDOW HEAD, DOOR, LOUVER AND/OR OTHER PENETRATION PLUS WALL OPENING PAN-TYPE FLASHING – 26-GAUGE GALVANIZED SHEET METAL, OR PVC PLASTIC**

2.20 **RUNNER AND CROSS-FURRING CHANNELS**

Galvalume galvanized steel channels, 1 1/2 inch (38 mm) and 3/4 inch (19 mm) a minimum of 33,000 psi yield strength and a minimum of 0.0538-inch bare steel thickness, ASTM A526.

A. Steel accessories per ASTM C 811

B. PVC plastic accessories per ASTM D1784 & C1105

C. Aluminum accessories from extruded alloy 6063 T5

STUCCO MATERIALS

A. Factory proportioned Portland cement based exterior stucco for use in scratch and brown coat stucco applications. Comply with the following:

1. Base Coat – Scratch and Brown Coat Stucco
2. Performance and Physical Properties at 73 degrees F (23 degrees C) and 50 percent relative humidity:
 - a. Base Coat Stucco Scratch and Brown Coat (No. 1139-80)
 1. Compressive Strength, ASTM C109: 900 psi (6.2 MPa) @ 7 days 1200 psi (8.3 MPa) @ 28 days
 2. Compliance, ASTM C926
 - b. Base Coat Stucco with Water-Stop (No. 1139-80)
 1. Compressive Strength, ASTM C109: 900 psi (6.2 MPa) @ 7 days 1,200 psi (8.3 MPa) @ 28 days
 2. Wind Driven Rain, ASTM E514: 0.002 lb (0.9 g) per hour
 3. Compliance, ASTM C926

FINISH COAT MATERIALS

A. Factory proportioned stucco finish coat and texture coat. Comply with the following:

1. Finish Coat Stucco
2. Performance and Physical Properties at 73 degrees F (23 degrees C) and 50 percent relative humidity:
 - a. Compressive Strength, ASTM C109: 900 psi (6.2 MPa) @ 7 days 1200 psi (8.3 MPa) @ 28 days

Suspended ceiling ceilings – 1 1/2-inch (38 mm) main runner, 3/4-inch (19 mm) cross furring.

2.25 **FURRING "HAT" CHANNELS**

Furring channel, galvanized 7/8-inch (22 mm), 20-gauge.

2.30 **MECHANICAL FASTENERS**

A. Non-corroding fasteners, depending on the type framing or substrate:

1. Wood framing – minimum 11 gauge, 7/16 inch (11 mm) diameter head galvanized roofing nails with minimum 1/4 inch (6 mm) penetration into studs or minimum #8 Type 304/316 head fully threaded corrosion resistant screws with minimum 3/4 inch (19 mm) penetration into studs. (Nails: FS FF-110; Screws: ASTM C646)
2. Steel framing – minimum #8 Type 304/316 head fully threaded corrosion resistant screws with minimum 3/8 inch (9 mm) penetration into studs. (Screws: ASTM C646)
3. Concrete or Masonry – minimum #8 rubber head fully threaded corrosion resistant screws for masonry with minimum 1 inch (25 mm) penetration into substrate. (Screws: ASTM C646)
4. Wood framing with DPM board or OSB board or plywood sheathing. Wire fast shall be fastened with corrosion resistant nails or 1" wide crown staples which penetrate at least 1" into the stud.

B. Tie Wire – #8 gauge galvanized and annealed low-carbon steel in compliance with ASTM A614 with Class 1 coating. (FS QQ-B-461g, AS)

2.40 **LATH**

A. Self-furring diamond-mesh metal lath galvanized, 2.5 to 3.5 lb per sq. yd. Shall comply with ASTM A87.

2.50 **TRIM ACCESSORIES**

- Trim Accessories shall be fabricated from galvanized steel, zinc alloy, PVC or anodized aluminum.
- Depth (the girth) of accessories depends on the required thickness of exterior glass finishes, unless the finish coat.
- Accessories of PVC plastic or zinc alloy are recommended if corrosion is a concern because of environmental conditions.

b. Compliance, ASTM C926 (Type F Plaster)

EXECUTION

3.10 **EXAMINATION**

A. Prior to starting lathing or plastering work, carefully inspect installed work to verify that work is complete to the point where work of this section may properly commence.

B. Notify the architect or proper authorities in writing of conditions detrimental to the proper and timely completion of the lathing and/or plastering work.

C. Do not begin installation until all unsatisfactory conditions are resolved.

D. A pre-construction meeting is recommended with the architect and/or owner, primary contractor and representative responsible for the windows, framing, lathing, roofing, scullies, stucco and any other building components interfacing with the stucco.

PERFORMANCE

A. The work shall be performed by a skilled and trained work crew.

B. Install specified products and/or systems in accordance with reference standards, manufacturer's recommendations, unless indicated otherwise in project documents.

C. Flashing shall be installed prior to start of lathing or may be required to be integrated at the time of lathing.

INSTALLATION OF STUCCO TRIM ACCESSORIES

A. Verify that substrate and work by other trades are complete to the point at which installation of trim accessories may properly commence.

B. Attachments shall be firm enough to hold trim accessories in place without misalignment during plastering.

- Flanges or attachment points of trim accessories shall be secured to substrate in accordance with requirements of manufacturer of approval documents. Space per manufacturer's directions.

C. Zinc alloy or PVC is recommended if trim accessories are exposed to a high-salt environment.

D. Install individual trim accessory sections to each other at end points for accurate alignment.

E. Install trim accessories in a manner that ensures a true, level and plumb stucco surface, and moisture resistant.

SUBSTANTIAL COMPLETION

Scope:

- Preparation the following:
 - Punch list
 - Warranties
 - Certifications
 - Occupancy permit
 - Start-up and testing of building systems
 - Changeover of locks
- Prerequisites to final acceptance
 - Final payment request with supporting affidavits
 - Completed punch list & instruction of Franchisee's personnel
- Record document submittals.
 - Provide a copy of "As-Built" drawings and a diskett each to Franchisor and Franchisee.
- GC shall repair, patch and touch-up marred surfaces to match adjacent finishes.
- GC shall clean the entire construction as a brand new facility.
 - At completion of construction GC, Franchisor and Franchisee shall conduct a final walk through before acceptance.
 - GC shall provide no less than a one (1) year warranty on all labor and materials used in constructing the **Ivy Kids Early Learning Center Franchise**.

F. Install the trim accessories in accordance with the required thickness of stucco basecoat and finish coat requirement.

G. Install the longest possible lengths of trim accessories. A minimum continuous section (length) of 7 ft. (2 m) is recommended.

TRIM ACCESSORY JOINTS

A. The water-resistant barrier must continue to be unbroken behind trim accessory joints in vertical or horizontal direction.

B. Locate trim accessory joints strategically at points where building movement is anticipated.

1. Wall penetrations
2. Structural plate lines
3. Junctions of dissimilar substrates
4. Existing construction joints in structure
5. Columns
6. Cantilevered areas

C. Joints are recommended in stucco assemblies with lath reinforcement but have limited use in direct-applied stucco over concrete or concrete masonry surface.

D. It is recommended that trim accessory joints be weather-sealed by embedment in caulking at intersections when placed end-to-end and at the terminations.

E. It is recommended to install vertical joints continuously and abut them to horizontal joints (be sure that water-resistant barrier runs continuously behind joints).

F. Install longest possible lengths. No termination of a section within 24 inches (600 mm) of an intersection with the exception of pre-manufactured trim accessory joint intersections.

G. Trim accessory joints shall be installed on framed, sheathed construction so as to create stucco panel of 150 to 180 sq. ft. (14 m² to 17 m²) in as square a configuration as possible.

H. Trim accessory joints shall be installed with concrete or concrete masonry construction so as to create a stucco assembly (with lath reinforcement) of 200 to 250 sq. ft. (18 m² to 23 m²).

I. Installing control joints over continuous lath is an approved method.

J. Sheathed framed construction with vertical trim accessory joints that require the lath to be terminated (cut) and installed on top of the flanges shall be placed at framing member locations. Lath shall be attached with appropriate fasteners through the trim accessory flange, sheathing and into the framing member.

REVISIONS AND ISSUANCE		
NO.	DATE	DESCRIPTION
1	07/20/2018	PRING
2	08/30/2018	ADDENDUM 1

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Mckinney Texas 75035

Developer
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Civil Engineer
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DRAWN BY	CHECKED BY
DATE	JOB NO.
05052018	mckinney-1

DRAWING TITLE

SPECIFICATIONS

DRAWING NO.

A-0.2B

Cool Roof Rating Systems Set Standards for Reflectivity and Emissivity

Title 24 / ENERGY STAR / LEED
How the Energy and Environmental Standards Compare
 Below are key points to help distinguish the unique requirements of each of these programs. For the roofing industry in particular, all of these rating systems have one thing in common: they all set standards for cool roof reflectivity and/or emissivity. Some standards are voluntary, while others are mandatory.

- Title 24 is mandatory in California.
- LEED (Leadership in Energy and Environmental Design) is highly encouraged among a growing list of city, state and federal agencies.
- ENERGY STAR is generally voluntary. However, meeting the ENERGY STAR standards for roofing reflectivity can help earn points in the LEED rating system.

Program	Requirement	Initial Reflectivity	3-Yr. Agged Reflectivity	Emissivity	SRI**
Title 24 (CA)	Mandatory	N/A	0.55	0.75	84=>
ENERGY STAR	Voluntary**	0.65	0.50	N/A**	N/A
LEED	Voluntary*	N/A	N/A	N/A	78=>

Note: Cool Roof Rating Council (CRRCC) lists product emissivity information according to ASTM C 1571. LEED accepts products tested for emissivity according to ASTM E 1980. Results may vary between test methods.

** Although voluntary, some local and state authorities are requiring designers to adhere to these guidelines for specific building types (i.e., government or state-funded projects).*

*** ENERGY STAR emissivity levels are not required at this time; however, manufacturers are required to test and report emissivity levels following appropriate test procedures.*

**** SRI is determined by using the reflectivity values, emissivity values and the steady state temperature equations defined in ASTM E 1980-01.*

Johns Manville's Product Offering for Cool Roofs
Reduce Energy Costs and Mitigate the "Heat Island" Effect of Development

Recommended roof systems include:

PVC
 Johns Manville offers white JM PVC with DuPont™ Evaloxy™ KEE (Ketone Ethylene Ester) membranes including JM PVC-50, JM PVC-60, JM PVC-80 as well as JM PVC-50 Heece Backed, JM PVC-60 Heece Backed and JM PVC-80 Heece Backed single ply systems, either mechanically attached or fully adhered.

TPO
 Johns Manville markets white JM TPO single ply systems either mechanically attached or fully adhered.

Bituminous Built-Up Roofing (BUR) and SBS
 CR cap sheets have white minerals and are factory-coated with one coat of TopGuard® Base and one coat of TopGuard® 5000 to meet cool roof standards.

As another option for bituminous systems, several non-CR BUR and SBS cap sheets may be coated with TopGuard Base and TopGuard 4000 or TopGuard 5000.

Product	Reflectivity** (ASTM C 1549)	Emissivity** (ASTM C 1371)	SRI* (ASTM 1980-01)
JM PVC	0.86	0.86	108
JM TPO	0.77	0.87	101
GlasKap CR	0.76	0.85	93
TopGuard® 4000	0.83	0.88	102
TopGuard 5000	0.83	0.88	102
SBS CR Membranes	0.76	0.85	92

* LEED's Solar Reflective Index.
 ** Test Methods used by CRRCC.

