

DIVISION-6 CARPENTRY

SECTION 6.1 GENERAL

6.1.1The "General Requirements" of these specifications are hereby made a part of this Division.

SECTION 6.2 ROUGH CARPENTRY

6.2.1 SCOPE

A.Includes all wood framing and truss installation required in the construction of the building and miscellaneous finishes not covered under other Sections of this Specification. This Scope is to include the furnishing of the rough lumber package, the truss package and the labor to install these items. For specifications on the truss package, see Paragraph 6.2.2, "Roof Trusses, Materials".

B.Furnished and installed as part of this Section:

- *1. Plates and straps under 1/8 inch thickness.
- *2. Joist hangers
- *3. Rough hardware as required.
- *4. All fasteners for connecting wood to wood.
5. Hollow Metal Doors and Frames mounted on the exterior of the building.
- *6. Asphalt felt backing behind exterior finish trim.

C.Work in connection with others:

1. Frame duct openings through wood partitions, provide curbs, platforms and openings for all roof mounted equipment, ventilation and exhaust systems.
2. Provide solid backing for all cabinets and fixtures.

* K.C. Metals and USP Lumber Connectors can be used in lieu of Simpson Products, but only if IRC or BOCA approved and of equal load values to the Simpson Products specified on drawings.

6.2.2 ROOF TRUSSES, MATERIALS

A. GENERAL

The wood and fabrication criteria of all prefabricated wood trusses shall meet with "National Design Specifications for Wood Construction" by National Forest Products Association (latest edition); "Timber Construction Standards" by American Institute of Timber Construction (latest revision); and "Design Specifications for Metal Plate Connected Wood Truss Construction" by Truss Plate Institute (latest edition), the same as if those specifications and all their references were set out in full herein.

B. LUMBER

All lumber used for the truss members shall conform to the published stress ratings for the species and grades as set out in the official grading rules of the appropriate lumber association or as listed in the reference specifications; except that, where ever this specification, or notes on the plans or truss engineering designs calls for lumber which exceeds the minimums set forth therein, the specifications, plans, and/or truss engineering designs shall be applicable. The moisture content of all lumber shall be within the proper limits, as stated in the reference specifications, but shall not, in any case, exceed 19% nor be less than 7% at the time of fabrication.

C. CONNECTORS

All truss connector plates shall be manufactured from only prime commercial quality galvanized sheet metal of no less than 20 gauge thickness which has a minimum yield of 33,000 psi and a minimum ultimate tensile strength of 48,000 psi. The corrosion-resistant coating shall be C-60 commercial class, hot-dipped galvanized before stamping.

D. FABRICATION

1. All truss designs shall bear the name and seal and/or registered number and state of registry of a licensed professional engineer.
2. See structural drawings for parallel chord (2X6/2X4) truss design and load requirements.
3. All trusses and other roof structural components shall be fabricated in a properly equipped manufacturing facility of a permanent nature. They shall be manufactured by experienced workman, using precision cutting and truss assembly methods and under the direct supervision of a qualified foreman. All trusses shall be fabricated under the strict rules of the Truss Plate Institute (TPI).
4. The qualified component manufacturer must be a member of the Truss Plate Institute and participate in the Quality Control Test Criteria Program, or show to OWNER a quality assurance program comparable to the TPI Testing Criteria Program.
5. All truss members shall be accurately cut to length and angle from straight lumber to assure tight joints for finished truss.

E. HANDLING AND ERECTION

1. Fabricated trusses and subassemblies shall be handled with care so that they are not subject to damage. If the trusses are to be stockpiled or stored prior to erection, they shall be set in the horizontal position, resting upon temporary bearing supports and braced so that they will be subjected to no unusual bending or tipping over.
2. The permanent structural cross-bracing, to insure the overall rigidity of the truss system, shall be in accordance with the structural and truss plans.
3. Proper erection bracing shall be installed to hold the trusses true and plumb and in safe condition until permanent truss bracing and bridging can be solidly nailed in place to form a structurally sound framing system. All erection and permanent bracing shall be installed and all components permanently fastened before the application of any loads to the trusses.
4. All prefabricated wood trusses are to be installed in accordance with "Commentary and Recommendations For Handling, Installing and Bracing Metal Plate Connected Wood Trusses HIB-91", as published by the Truss Plate Institute.

6.2.3 FRAMING, MATERIALS

A. GENERAL

1. All lumber shall be grade stamped by "Western Wood Products Association" certified by the Board of Review of the American Lumber Standard Committee and manufactured in accordance with Product Standard 20_70, as published by the United States Department of Commerce.
2. All lumber shall not have a moisture content which exceeds 19% and shall indicated "S-Dry" on the grade stamp. Any Southern Pine material shall have a moisture content of 15%, kiln dried and shall be so indicated on the grade stamp.

B.2X2 THROUGH 4X4 FRAMING (excluding structural posts): Any commercial softwood which conforms with the following minimum design values (in P.S.I.):

Fb (non-repetitive)	675
E (perpendicular)	625
F	1,400,000
Typical material:	See Plans.

C.2X6 THROUGH 4X16 FRAMING: Any commercial softwood which conforms with the following minimum design values (in P.S.I.):

Fb (non-repetitive)	875
E (perpendicular)	625
F	1,600,000
Typical material:	Douglas Fir "No. 2" grade.

D.Non-Bearing Stud Framing: Any commercial softwood which conforms with the following minimum design values (in P.S.I.):

Fb (non-repetitive)	675
F (parallel)	825
Typical material:	Douglas Fir "Stud" grade.

E.4X4 Post Framing: Shall conform with the following minimum design values (in P.S.I.):

Fb (non-repetitive)	1000
E (perpendicular)	625
F	1,700,000
Typical material:	Douglas Fir "No. 1".

F.Wood "Stud" Site and Pressure-Treated Lumber: Shall be "Water-Borne Salt" pressure treated lumber, and shall conform to AWBP Quality Control Standard #P-2.

G. Structural Wood Panels: All Sheathing shall be APA rated Structural Wood Panels, exterior type. Structural Wood Panels may either be Plywood conforming to U.S. Product Standard PS 1-95 or Oriented Strand Board conforming to U.S. Product Standard PS-2-92. Panels shall be the size and quantity specified on the structural drawings. Each panel shall be identified with the appropriate grade trademark of the American Plywood Association.

6.2.4 MISCELLANEOUS

- A.Additional Blocking: Provide solid backing for plumbing fixtures, cabinets, light fixtures, behind side ledgers, etc., as necessary.
- B.Additional Framing: See structural drawings.
- C.All finish wood siding and exposed plywood siding shall be applied over one layer of asphalt saturated building paper.
- D.Notching: Notches on the ends of joists shall not exceed one fourth the joist depth. Holes bored in joists shall not be within 2 inches of the top or bottom of the joist, and the diameter of any such hole shall not exceed one third of the depth of the joist. Notches in the top or bottom of the joists shall not exceed one sixth the depth and shall not be located in the middle third of the span. Holes through sills, plates, studs and double plates in interior bearing and shear walls shall not exceed 1/3 the plate width and shall be bored holes placed in the center of the stud or plate.

E. Bracing:

All bearing walls not solidly sheathed shall have a diagonal let-in brace (1X4 wood or 15 ga. galvanized wall brace strap) at each end and at 25 feet on center.

A.All bolt heads and nuts bearing on wood shall have washers. All bolt holes in wood shall be drilled 1/32 inch to 1/16 inch diameter larger than the nominal bolt diameter.

B.All framing shall comply with the governing codes whether or not specifically detailed on the plans.

6.2.5 WORKMANSHIP

- A.Layout accurately, plumb and level, all work.
- B.Construct framing with joints true and tight and well fastened with members assembled according to best practice.
- C.Brace structure adequately during erection.
- D.Adequately anchor installed work.
- E.All framing shall be of first class quality and workmanship.
- F.Drive pins are not permitted in any structural wall.

6.2.3 FRAMING, MATERIALS

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SECTION 6.3 FINISH CARPENTRY & MILLWORK

6.3.1 SCOPE

A.Millwork of all types including milling of ... interior and exterior exposed wood members, door and window frames.

B.Furnishing and installation of the interior hollow metal doors and frames. Hollow metal doors and frames shall conform to the specifications and standards of Section 8.4 of this Specification.

C.Includes finish carpentry and the installation of doors and frames, blocking, case and cabinet work, millwork, plastic laminate work, and false beams as indicated on drawings, and furnishing and installation of the Finish Hardware package.

6.3.2 MATERIALS

A. GENERAL

1. All Exterior and Interior finish lumber shall be net 3/4" thick for 1" material, and net 1 1/2" thick for all 2" material. The above applies to both surfaced and saw-textured material. All lumber shall conform to the standards and grading rules of the Western Wood Products Association, 1995 edition.
 2. Unless specified otherwise all lumber material grain patterns may be provided mixed grain.
 3. All finish lumber shall be stored on-site off the ground, well ventilated and covered. All interior material shall be stacked and labeled in the room in which it will be applied, prior to installation.
 4. All interior finish material shall be dried to a maximum moisture content of 15% and shall indicate "MC-15" on the grade stamp.
 5. All exterior material shall be back and edge primed/sealed by Painting Contractor prior to application on building surface. All finish wood material shall be installed over asphalt saturated building paper.
- B.Exterior Woodwork:
1. Window Frames and Stops: All material shall be S4S, Western Red Cedar, "C-Select" grade and shall conform to WPPA section 10_12 or as shown on plans.
 2. Door Frames and Stops: All material shall be S4S, Douglas Fir, "Prime Finish" grade and shall conform to WPPA Section 10_52 or as shown on plans.
 3. Wood Trim: All material shall be saw-textured (exposed surface) by band saw, Western Red Cedar, "D-Select" WPPA Section 10_13 or as shown on plans.
 4. Plywood: All finish plywood shall be 3/8" thick, exterior grade, American Plywood Association Siding #303_6_S/W with lapped edge, rough-sawn textured. Plywood shall be any Group 3 material, unless a specific material is called for on the drawings. Parapet inside Face: 1/2" ext. ply, medium density resin face if shown on plans.

C.Interior Woodwork:

1. Wood Trim: All interior wood trim and materials shall be S4S, Douglas Fir, "Prime Finish" grade and shall conform to WPPA Section 10_52; or Idaho White Pine, "Choice WPP" grade and shall conform to WPPA Section 10_12.
2. Oak Trim & Siding: Shall be S4S, Red Oak, plain sawn, "Grade 1" and conform to the Architectural Woodwork Institute's (AWI) Quality Standards, Section 100S_1.
3. Decking shall be "C" select kiln dried saw textured Douglas Fir and shall conform to WPPA section 10_12.
- D.Nailing (Exterior): All trim and siding shall be nailed with hot-dipped galvanized finish nails. No electroplated nails will be allowed. Lumber 1 1/2" and larger shall be nailed with 20d finish, and lumber less than 1 1/2" shall be nailed with 8d finish. Nails shall be driven flush with surface. Do not set any exterior nailing.
- E.Nailing (Interior): All nailing shall be with finish nails, set for putty before staining/finishing. At saw-textured material, nails shall be driven flush.

6.3.3 INTERIOR FINISH

A.Mill, fabricate and erect interior finish materials as indicated. Machine-sand at the mill and hand-sand smooth at job site as necessary. Contractor to ease all edges of finish material before sealant is applied.

B.Interior trim set against plaster or wood shall be run with hollow backs. Make joints tight and in a manner to conceal shrinkage. Secure trim with fine finishing nails, screws, or glue where required. Set nails for putty, where surface is S4S.

C.Window and door trim shall be single lengths, base in long lengths. Miter moldings at corners, cape at angles. Door jambs with scarfed joints are not permitted. All segments of jambs shall be in single lengths.

6.3.4 CABINET WORK

A.Fabrication and installation of all cabinets shall be as indicated on the construction documents. All cabinets shall be laminate clad, exposed face frame and shall conform to the minimum standards of the Architectural Woodwork Institute; AWI quality grade "Custom Grade" (AWI Section 400B).

B.All cabinet shelving shall be adjustable. Detailing for self connection (adjustable track) to uprights shall be in conformance with AWI quality grade "Custom Grade".

C.All cabinets shall be mill fabricated, complete with rails, styles, cabinet hinges, pulls, catches and 1" locks. Cabinet finish hardware shall be as follows:

1. hinges: Ferum #E12-NP Nickel Plated as (Piano Hinge)
2. locks: National YN703-14-KA (keyed alike) Bright Nickel
3. pulls: Ferum #FF-484 Chrome
4. drawer guides: Knape & Vogt #1455
5. elbow catches: Epoce #EP10189N Nickel (installed at inactive side of cabinet door pairs).

D.See section 6.4 of this specification for plastic laminate requirements, manufacturer and finish.

6.3.5 HARDWARE INSTALLATION

A.Accurately fit and install all finish hardware items furnished under the "Finish Hardware" section 8.6 of this specification.

B.If surface applied hardware is fitted and applied before painting, remove all such items, except butts, re-install after painting work is complete.

C.Properly label and deliver all keys to OWNER.

6.3.6 WORKMANSHIP

All wood finish, millwork and cabinet work shall be true to details, clean and sharply defined. Panels shall be set to allow for free movement in case of swelling or shrinkage. Means of fastening various parts together shall be concealed. All wood finish and cabinet work shall be dressed, sanded and cleaned before priming. All materials showing machinery, sandpaper or other defacing marks will be rejected. All work shall be first class construction and to the satisfaction of OWNER. No plywood edge grain shall be exposed on cabinets or shelving; all such areas shall be self-edged.

SECTION 6.4 PLASTIC LAMINATE

6.4.1 SCOPE

Includes all labor, material and equipment required to furnish and install all high pressure laminated plastic as shown on the construction documents.

6.4.2 MATERIALS

A.Plastic Laminate shall be .050 inches thick, "General Purpose Type". Color, texture and finish shall be as specified in the Color/Material Schedule on the construction documents.

B.Adhesive shall be as recommended, and approved by plastic laminate manufacturer.

6.4.3 INSTALLATION

A.Application of plastic laminate to various surfaces shall conform to all manufacturer's instructions and shall to the satisfaction of OWNER.

B.At self edged surfaces, the flat top layer shall overlap the vertical surfaces and then corner edge shall be routed smooth.

C.All joints to be tight to adjoining surface, unless noted otherwise on plans.

DIVISION 7 MOISTURE PROTECTION

SECTION 7.1 GENERAL

7.1.1 The "General Requirements" of these specifications are hereby made a part of this Division.

SECTION 7.2 ROOFING AND MANSARD COVERING

7.2.1 SCOPE

A.Includes all materials, labor and accessories to complete the work specified on drawings.

B.Related items installed under other section.

1. Sheet metal

2. Mechanical, Electrical and Plumbing roof jacks.

C.Pre-installation Conference: Conduct conference at Project site. Review methods and procedures related to roofing system including, but not limited to, the following:

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing installer, roofing system manufacturer's representative if required by manufacturer, deck installer, and installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.
10. The Roofing Contractor shall immediately notify the Owner in writing of any defective work by others, that might prevent him from properly performing his work in a first-class workmanlike manner in accordance with this specification. He shall not proceed with any work until such defects are remedied and the work approved by the Owner.

D.Guarantee:

1. Installer's Guarantee: Contractor shall provide to the Owner a one (1) year written guarantee for all roofing against defective workmanship and materials including all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, roof pavers, and walkway products, and shall, upon notification, immediately correct any and all defects that may occur. - Unless noted otherwise below.
2. Manufacturer's Guarantee: For the flat roof sections, contractor shall provide to the Owner a twenty (20) year written manufacturer's system guarantee for all roofing against defective workmanship and materials including all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, and walkway products. Guarantee shall have No Dollar Limit (NDL).

7.2.2 MATERIALS AND INSTALLATION

A.Flat Roof (Equipment Well) Materials: All materials must be tested by the roofing manufacturer, marketed as their product, install roof system according to manufacturer and NRCA guidelines complying with all requirements of the manufacturer NDL guarantee. This includes curbs, walls, and all penetrations.

B.ALTERNATE Flat Roof (Equipment Well) Materials: (PVC) - (TPO IS NOT ACCEPTABLE)

1. POLYVINYL-CHLORIDE ROOFING: Class A" rating, must be tested by the manufacturer and marketed as their product. All materials shall be delivered in original packages bearing the manufacturer's label. All materials shall be from one of the following manufacturers and shall conform completely to the manufacturer's specifications and NRCA standards. Installers are required to provide proof of certification by the appropriate manufacturer for the PVC product they intend to install. Accepted manufacturers are Johns Manville-Contact: Aaron Hill @ 415 200-6726 or Durolast- (no contact info)

- a. PVC Membrane Sheet: ASTM D 4434, Type III reinforced membrane that contains KEE (Elvaloy) to reduce plasticizer migration. If the membrane does not contain KEE, then a post installation coating is required to mitigate plasticizer migration. i. Thickness: 60 mils nominal
- b. Sheet Flashing: Manufacturer's unreinforced sheet flashing of some material as sheet membrane.
- c. Metal Termination bars, with anchors.
- d. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer. Product: High Load Fasteners and Plates
- e. Miscellaneous Accessories: Provide pourable sealers, pre-formed cone and vent sheet flashings, preformed, inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, and other accessories.
- f. Provide factory fabricated boots for all conduit and pipe penetrations.
- g. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads sourced from membrane roofing system manufacturer. Place walk pads around equipment that is accessed by a technician and the roof hatch with path between. See Roof Plan.

2. INSULATION AND COVER BOARD.

a. Refer Section 7.4

SECTION 7.3 SHEET METAL

7.3.1 SCOPE

C.Includes all sheet metal formed sections, flashings, counterflashing, pitch pockets, diverters, gutter, downspouts, gravel guards, special screens, and attic vents.

D.Does not include work covered in sections on plastering, plumbing, air conditioning, roofing and miscellaneous metal.

7.3.2 MATERIALS

A.Flashings: ASTM A_93, 24 ga. standard zinc coated steel.

B.Solder: ASTM B_32-60 at.

C.Downspouts: ASTM A_93, 24 ga. standard zinc coated steel (if shown on plans).

D.Plaster Box Liner: ASTM A_93, 16 ga. standard zinc coated steel (if shown on plans).

7.3.3 INSTALLATION

- A.Erasing: 1. All joints in flashings, coping metal, roof platforms, and other metal work, shall be installed using a synthetic Elastomer base caulking. All joints shall be set in caulking, pop-riveted, and caulking then applied to exterior of joint. No other type sealants are permitted.
2. Hem all exposed edges of metal.
3. Flash all joints necessary for a watertight job whether specifically detailed or not.
4. All flashing to have one layer of 15 lb. asphalt felt under.
5. All work shall be done in accordance with the "Sheet Metal and Air Conditioning Contractors National Association" standards.
- B.Downspouts and G.I. Gutters: 1. All joints shall be soldered, close for a fully watertight job.
2. Hem all exposed edges of metal.
3. Downspouts shall conform to the details as shown on the drawings.
4. All work shall be done in accordance with the "Sheet Metal and Air Conditioning Contractors National Association" standards.
- C.Parapet Coping, Gravel Stops, S-rocks, and Flush Seam Paneling: 1. Conform to sectional profiles as shown on the drawings.

SECTION 7.4 INSULATION

7.4.2 MATERIALS AND INSULATION

A.Fiberglass Noise Barrier Batts, unfaced with nominal thickness 3 1/2 inches X 16 1/8 inches to fit framing. Select one of the following manufacturers:

1. Certain Teed Fiberglas
2. Manville Building Materials
3. Owens/Corning Fiberglas

B. Thermal insulation at all exterior walls shall be minimum R_19 "Kraft Faced" fiberglass. No paper where exposed. Select one of the following manufacturer's (refer to plans for exact "R" values required):

1. Certain Teed Fiberglass
2. Manville Building Materials
3. Owens/Corning Fiberglass
4. Dow Chemical Thermox Insulation Board
5. Perimeter Seal Insulation: Rigid, cellular thermal insulation with closed-cells and integral high density skin, formed by the expansion of polystyrene base resin in an extrusion process to comply with ASTM C578 for type indicated; with 5-year aged R-values of 5.4 and 5 at 40 and 75 deg. F (4.4 and 23.9 deg. C.) respectively, 1" thickness unless otherwise noted.
6. Dow Chemical Co. - Styrofoam SM
7. Owens-Corning - Foamular 250
8. Diversifoam Products - Cerifoam SE
9. Armofoam Products - Armofoam CM
- D. Rigid Roofing Insulation: 2 layers of polyisocyanurate board insulation run perpendicular to minimize joint alignment. Insulation Thermal Value (R), minimum: See Thermal Envelope Requirements on Sht. T1. Provide insulation of thickness required for two layer application.
- E. All insulation batts shall be securely stapled to studs at walls. Insulation in sloping ceiling shall be located where shown on plans and installed per manufacturer latest printed specs.

F. Any insulation that is to be exposed and painted shall be covered with a layer of foil paper stapled to sides of trusses in a neat manner ready to receive paint.

G. Sill Plate Gasket to be installed between concrete slab and wood sill plate, following manufacturer's written instructions.

1. 3/8" thick polyethylene with self-adhering strip: Use "Plate Liner" as manufactured by Protecto Wrap or equal.
2. Width to match sill plate width.

SECTION 7.5 CAULKING AND SEALANT

7.5.1 SCOPE

Caulk all joints between masonry and wood, masonry and break metal, and all other dissimilar materials.

7.5.2 MATERIALS

- A. Polyurethanes: 1. Synthcoat GC-24 Polyurethane B. Silicone (Building Sealant): 1. Dow Corning: Silicone Sealer #795 2. General Electric: Silpruf #SCS2000 Weatherproof Sealant C. Silicone (Interior Sealant): 1. Dow Corning: Mildew Resistant #786 2. General Electric: Silicone Sanitary Sealant #SCS1700
- 7.5.3 APPLICATION

A. Prime all surfaces designated by the manufacturer.

B. All caulking and sealants to be the proper material for the situation as determined by manufacturer's suggest applications. Mixing and application of caulking compounds shall be in accordance with manufacturer's current specifications.

C. Joints and spaces deeper than 1/4" inch shall be filled solidly with oakum to within 1/4" inch of surface before caulking.

D. Apply caulking at joints around wood and metal frames attached to plaster or masonry finished exterior walls, joints at exterior door sills and metal thresholds, and where not specifically excluded, necessary to obtain complete weathertight construction.

E. Caulk solidly between door and window, frames, and abutting surfaces. Remove and caulk molds not an integral part of door or window frames.

F. Set fixed doors, door stops, all exterior glass stops, sills and thresholds in a full bead of caulking compound. Remove excess compound after sill or threshold is set.

7.5.4 FINISH

A. Finish all caulked joints with the proper tool and remove caulking compound from all adjacent surfaces. Exposed caulking shall be free from wrinkles.

B. Exposed caulking shall be selected to match colors of adjacent finishes.

NOTE: Caulking bead shall be installed with a small uniform bead, smoothly finished, and acceptable to the Owner. Any work unacceptable shall be removed and redone to an acceptable condition.

7.6 Not Used

7.7 Not Used

SECTION 7.8 (EIFS) EXTERIOR INSULATION AND FINISH SYSTEM

7.8.1 SCOPE

A. Furnish and install all Polymer-Based EIFS and all accessories for walls, cornices, copings, soffits, and accent features as indicated on the construction documents.

B. Related Work Specified Elsewhere:

1. Substrates
 2. Adjoining non-plaster surfaces
 3. Expansion Joints- Refer to stucco specification & drawings.
 4. Backer Rods and Sealants/Caulkings*
 5. Waterproofing/Damp-proofing*
 6. Signage
- *Must comply with EIFS manufacturer's approvals.

7.8.1.1 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Only manufacturers who provide all of the following are acceptable suppliers for this project:

1. Successful EIFS performance history over at least ten years in the geographical area of this project.
2. Established on-going contractor/applicator training programs for at least ten years in the area of this project.
3. Full-scale fire test reports and documentation of ICC Acceptance.
4. Resident Sales / Field Technical Service personnel.
5. Local inventory of EIFS products.
6. Must be an active member of EMA (EIFS Industry Members Association)

B. Applicator's Qualifications: Only applicators who provide all of the following are acceptable for this project (Itemized Certificate of Compliance required):

1. Licensed, Bonded, Insured (Documentation Required).
2. Successful performance history with EIFS over at least five years in the area of this project.
3. Trained by EIFS manufacturer or AWC EIFS smart program for at least five years.
4. Established on-going training program for workmen, including manufacturer's training.
5. Pre-Application Conference attendance and periodic inspection of work in progress by principal/officer of firm.
6. Three-year minimum warranty on workmanship.
- C. Supervision/Inspection: 1. Provide continual daily supervision of working crew.
2. Secure daily inspection by General Contractor.
3. Provide periodic inspection by a principal/officer of the installing firm.
4. Secure observation reports by the manufacturer's representative/agent. Observation visits must be scheduled by the General Contractor and/or the selected EIFS contractor.

D. Substrate Protection

1. Protect exterior gypsum board, plywood, and other "moisture-sensitive" substrate materials from exposure to adverse weather; replace all substrate materials evidencing adverse effects of weathering. These are responsibilities of the General Contractor.
2. Protect unfinished areas of installed EIFS from exposure to adverse weather; ensure that no water is allowed ingress or trapped behind or within the EIFS. These are responsibilities of the General Contractor.

7.8.1.2 DELIVERY, STORAGE, HANDLING

A. Deliver all materials in unopened manufacturer's packaging.

B. Deliver and maintain all materials free of damage/contamination.

C. Protect "wet goods" (products in pails) from temperatures below 35 degrees Fahrenheit and above 110 degrees Fahrenheit/direct sunlight.

D. Handle, mix, and apply materials only as recommended by manufacturer.

7.8.1.3 APPLICATION CONDITIONS

A. Apply all materials when ambient temperatures are 40 degrees Fahrenheit, or above, and rising, but under 110 degrees Fahrenheit. "Tent" areas to protect from weather and provide dry heat and air movement as required to maintain project schedule.

B. Apply all materials when rain forecast is zero percent for the next 24 hours. "Tent" areas to protect from weather if required to maintain project schedule.

C. Apply all materials when relative humidity is below 80 percent and expected to remain so, or drop, over the next 24 hours. Application up to 90% RH may take place if wind velocity exceeds 7-1/2 mph.

D. Apply all materials to substrate that is clean, dry, dust free, and otherwise suitable for covering.

7.8.1.4 WARRANTIES

A. Provide Manufacturer's five-year limited materials and labor warranty within 30 days of substantial completion of project.

B. Provide installing firm's three-year warranty on workmanship within 30 days of substantial completion of project.

C. Provide general contractor's three-year warranty covering substrate, sealant, flashings, and EIFS installation within 30 days of substantial completion of project.

D. Receipt of all warranties is a prerequisite to final payment.

7.8.2 MATERIALS

7.8.2.1 ACCEPTABLE MANUFACTURERS

- A. Sto Corp. - Stotherm Essence
1. Contact: Sto Strategic Accounts - 1-888-786-3437
- B. Dryvit Systems, Inc.
1. Contact: Strategic Accounts - 734-243-9301 or 734-276-0404

(Note: for those parts of the country where state or local codes require the use of a / moisture protected drainage system, refer to manufacturers recommendations.)

7.8.2.2 ACCEPTABLE MATERIALS

Insulation Board (Thicknesses as shown on drawings):

E. Exterior Insulation Board: Nominal 1.0 lb/ft³ (16 kg/m³) Expanded Polystyrene (EPS) Insulation Board in compliance with ASTM E 2430 and ASTM C 578 Type I requirements.

F. Fasteners: (fasteners are not required for new construction unless deemed necessary by job-site conditions. Fasteners may be necessary for existing facilities in need of renovation, depending on condition of existing substrate (s)).

1. Wind-Load "Wind-Defl" Fasteners.