MASONRY WALLS, including cavity walls, extend flashing through outer wythe, turned up a minimum of 8 inches, and through inner wythe to within 1/2 inch of the interior face of wall in exposed masonry. Where interior face of wall is to receive furring or framing, carry flashing completely through inner wythe and turn flashing up approximately 2 inches on interior face.

AT MASONRY-VENEER WALLS, extend flashing through veneer, across air space behind veneer, and up face of sheathing at least 8 inches; with upper edge tucked under building paper or building wrap, or behind exterior sheathing board when building paper does not exist, lapping flashings at least 4 inches.

INSTALL SELF-ADHERING FLASHING SYSTEM in strict accordance with flashing system manufacturer's installation instructions and recommendations. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing 1 inch back from outside face of wall and adhere flexible flashing to top of metal drip edge. Install cavity-bridge units to span any openings that would not support the flashing material. Place metal drip-edge in a bead of urethane sealant, and apply flashing material to top of drip-edge starting 1 inch from outside edge of masonry. Apply flashing material to the face of glass-mat gypsum sheathing panels with the flashing manufacturer's primer, and extend up face of sheathing at least 8 inches. Seal top edge with manufacturer's flashing mastic per manufacturer's recommendations.

AT LINTELS AND SHELF ANGLES, extend flashing a minimum of 6 inches into masonry at each end. At heads and sills, extend flashing 6 inches at ends and turn up not less than 2 inches to form end dams.

INSTALL WEEPS in the head joints in exterior wythes of the first course of masonry immediately above embedded flashing. Use rectangular plastic tubing to form weeps. Space weep units 24 inches o.c. Place cavity drainage material immediately above flashing in cavities at each weep.

INSTALL REGLETS AND NAILERS for flashing and other related construction where they are shown to be built into masonry.

MASONRY JOINT REINFORCEMENT

PROVIDE CONTINUOUS MASONRY JOINT REINFORCEMENT by installing entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches. Space reinforcement not more than 16 inches o.c. typically, and at not more than 8 inches o.c. in foundation walls, free-standing enclosure walls, and parapet walls. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings, in addition to continuous reinforcement.

CUT OR INTERRUPT JOINT REINFORCEMENT at control and expansion joints, unless otherwise indicated. Provide continuity at corners and wall intersections by using prefabricated "L" and "T" sections. Cut and bend reinforcing units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

ANCHOR MASONRY VENEERS to wall framing with masonry-veneer anchors by fastening screw-attached anchors through sheathing to wall framing with a minimum of two (2) metal fasteners unless anchor design only uses one fastener. Embed tie sections in masonry joints. Locate anchor sections to allow maximum vertical differential movement of ties up and down. Space anchors as indicated, but not more than 16 inches o.c. vertically and 24 inches o.c. horizontally. Install additional anchors within 12 inches of openings and at intervals, not exceeding 8 inches around perimeter.

CONTROL AND EXPANSION JOINTS

INSTALL CONTROL AND EXPANSION JOINTS in unit masonry where indicated. Build-in related items as masonry progresses. Do not form a continuous span through movement joints unless provisions are made to prevent in-plane restraint of wall or partition movement.

FORM CMU CONTROL JOINTS by (1) fitting bond-breaker strips into hollow contour at ends of units on one side of control joint, filling resultant core with grout, and raking joints in the exposed faces., or (2) by using control-joint gaskets designed to fit standard sash block, or (3) by installing special shaped interlocking units designed specifically for control joints. Install bond-breaker strips at all control joints. Keep head joints free and clear of mortar or rake out joint for application of sealant. Install temporary foam-plastic filler in head joints and remove filler when unit masonry is complete.

FORM EXPANSION JOINTS IN BRICK by forming open joint of not less than 3/8 inch for installation of sealant and backer rod specified in Division 7 Section "Joint Sealants." Keep joint free and clear of mortar.

CONSTRUCT HORIZONTAL, PRESSURE-RELIEVING JOINTS where indicated by inserting a compressible filler of 3/8-inch high minimum for installing sealant and backer rod specified in Division 7 Section "Joint Sealants." Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry veneer and attached to structure behind masonry veneer.

LINTELS

INSTALL STEEL LINTELS IN BRICK MASONRY if precast lintel or other structural support is not indicated on the Drawings and opening is greater than 12 inches.

PROVIDE PRECAST LINTELS IN CMU WALLS except where steel lintels or other structural support is indicated on the Drawings and opening is greater than 24 inches. Temporarily support built-in-place lintels until cured.

PROVIDE MINIMUM BEARING of 8 inches at each jamb, unless otherwise indicated.

REINFORCED UNIT MASONRY INSTALLATION

TEMPORARY FORMWORK AND SHORES: Construct formwork and shores to support reinforced masonry elements during construction. Construct formwork to conform to shape, line, and dimensions shown. Make it sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other temporary loads that may be placed on them during construction.

PLACING REINFORCEMENT: Comply with requirements of ACI 530.1/ASCE 6/TMS 602.

GROUTING: Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist grout pressure. Comply with requirements of ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.

FIELD QUALITY CONTROL

THE OWNER WILL ENGAGE a qualified independent testing agency to perform field quality-control testing indicated below. Payment for these services will be made by Owner. Retesting of materials failing to meet specified requirements shall be done at Contractor's expense.

Testing Frequency: Tests and Evaluations listed in this Article will be performed during construction for each 5000 sq. ft. of wall area or portion thereof.

Mortar properties will be tested per ASTM C 780.

Grout will be sampled and tested for compressive strength per ASTM C 1019.

Brick Tests: For each type and grade of brick indicated, units will be tested according to ASTM C 67.

Concrete Masonry Unit Tests: For each type of concrete masonry unit indicated, units will be tested according to ASTM C 140.

Prism-Test Method: For each type of wall construction indicated, masonry prisms will be tested per ASTM C 1314, and as follows:

Prepare 1 set of prisms for testing at 7 days and 1 set for testing at 28 days.

REPAIRING, POINTING, AND CLEANING

REMOVE AND REPLACE MASONRY UNITS that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.

POINTING: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application.

IN-PROGRESS CLEANING: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.

FINAL CLEANING: After mortar is thoroughly set and cured, clean exposed masonry as follows:

Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.

Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.

Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent, polyethylene film, or waterproof masking tape.

Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing the surfaces thoroughly with clear water.

Clean brick by the bucket-and-brush hand-cleaning method described in BIA Technical Notes No. 20, using job-mixed detergent solution.

Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.

Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2 applicable to type of stain on exposed surfaces.

MASONRY WASTE DISPOSAL

RECYCLING: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.

SECTION 05 40 00 – COLD-FORMED MTL FRAMING

WORK INCLUDED: Provide cold-formed metal framing as shown on the drawings, as specified herein, and as needed to meet the requirements of the construction shown in the Contract Documents.

SYSTEM COMPONENTS: Provide standard steel runner tracks, blocking, lintels, clip angles, shoes, reinforcements, fasteners, and accessories as recommended by manufacturer for applications indicated, and as needed to provide a complete metal framing system.

(Specifications continued in next column)

STEEL FOR 0.042 INCH THICK (18 GAGE) AND LIGHTER UNITS: commercial quality steel sheet with a minimum yield point of 33,000 psi; per ASTM A-446, A-570, or A-611.

PUNCHED "C" – SHAPE STUDS or JOISTS: standard load-bearing steel studs or joists of size indicated, with 1.625" flange and flange return lip. Provide minimum 0.032 inch thick (20 gage) units, or as otherwise noted on drawings.

PROVIDE PRIME COAT FINISH: one coat of shop-applied red-oxide, zinc-chromate, or other similar rust-inhibitive primer, unless otherwise noted.

INSTALL in accordance with manufacturer's printed or written instructions and recommendations. Install runner tracks sized to match studs. Align accurately to layout at base and top. Secure track as recommended by manufacturer for type of construction involved, except do not exceed 24" o.c. spacing for nail or powder-driven fasteners, or 16" o.c. for other types of attachment. Provide fasteners at corners and ends of tracks. Set studs plumb, except as needed for diagonal bracing or required for non-plumb walls or warped surfaces and similar requirements. Anchor ends of stiffeners to supporting structure, where stud system abuts structural columns or walls.

INSTALL SUPPLEMENTARY FRAMING, blocking and bracing in metal framing system wherever indicated to support fixtures, equipment, services, casework, heavy trim and furnishings, and similar work requiring attachment to the wall or partition. Where type of supplementary support is not otherwise indicated, comply with stud manufacturer's recommendations and industry standards in each case, considering weight or loading resulting from item supported.

INSTALLATION OF WALL STUDS: Secure studs to top and bottom runner tracks by either welding or screw fastening at both inside and outside flanges.

FRAME OPENINGS larger than 2'-0" square with double studs at each jamb of frame except where more than 2 are either shown or indicated in manufacturer's instructions. Install runner tracks and jack studs above and below wall openings. Anchor tracks to jamb studs with stud shoes or by welding, and space jack studs same as full-height studs of wall. Secure stud system wall opening frame in manner indicated.

INSTALL HORIZONTAL STIFFENERS in stud system, spaced no more than 4'-6" in vertical distance. Weld at each intersection.

TOUCH-UP PAINTING in field using compatible primer for prime coated surfaces.

SECTION 05 50 00 – METAL FABRICATIONS

PROVIDE metal fabrications where shown on the drawings and as specified herein.

FIELD MEASUREMENTS: Check actual locations of walls and other construction to which metal fabrications must fit, by accurate field measurements before fabrication; show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay of Work.

MATERIALS: Provide steel plate, shapes and bars meeting ASTM A36, steel pipe meeting ASTM A53 – grade A schedule 40, and steel tube meeting ASTM A500. For materials that will be exposed to view, provide materials that are free from surface blemished, pitting, rolled trade names, and roughness.

FASTENERS must be zinc-coated fasteners for exterior use or when built into exterior walls as follows:

- Bolts and Nuts: Regular hexagon head type, ASTM A-307, Grade A.
- Log Bolts: Square Heat type, FS FF-B-561.
- Machine Screws: Cadmium plated steel, FS FF-S-92.
- Plain Washers: Round Carbon Steel FS FF-W-92.
- Toggle Bolts: Tumble wing type, FS FF-B-588, Type, class and style as required.
- Lock Washers: Helical spring type carbon Steel, FS FF--W-84.
- Drilled-In Expansion Anchors: Expansion anchors complying with FS FF-S-325, Group VIII (anchors, expansion, [nondrilling]), Type I (internally threaded tubular expansion anchor); and machine bolts complying with FS FF-B-575, Grade 5.

SECURITY MESH (at drywall demising partitions adjacent to "public areas" up to 10 ft AFF – not at adjacent stores): Flattened expanded carbon-steel mesh constructed of .042 inch (18 gage) carbon steel with 1/2" spacing of perforated openings – in 10 foot tall units: "Ametco" Flattened 1/2" x # 18 (.039 inch thick flattened) or approved equal.

WIRE MESH ABOVE 10 FT (at drywall demising partitions adjacent to "public areas" up to 10 ft AFF – not at adjacent stores): ASTM A-185 welded steel wire sheet (not rolled), min. 6 x 6 – W2.9 x 2.9

BURGLAR BARS: 3/8" diameter steel bars framed with an opening no greater than 8" x 8" to span any building opening larger than 12" x 12" or 12" in diameter, including openings for ductwork at all roof-top HVAC units, securely attached to building structure.

SHOP PRIMER: Manufacturer's standard rust- inhibiting primer; compatible with finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in Division-09 "Painting" Section.

FABRICATION and installation must conform to the latest AICS Specifications, and perform all shop-welding by an AISC-Certified steel fabricator. Form Work true to line and level with accurate angles and surfaces. Ease exposed edges to a radius of approx. 1/4" unless otherwise shown. Weld corners and seams continuously, coping connections, unless otherwise indicated. Grind exposed welds smooth and flush to match and blend with adjoining surfaces. Provide shop coat of red oxide primer and touch-up at project site as required. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type shown or, if not shown, Phillips flat-headed (countersunk) screws or bolts.

ROUGH HARDWARE: Furnish bent or otherwise custom fabricated bolts, plates, anchors, hangers, dowels, and other miscellaneous steel and iron shapes as required for framing, supporting or anchoring.

PROTECT finishes of metalwork during construction period by use of temporary protective coverings. Remove protective covering at time of Substantial Completion. Restore finishes damaged during installation and construction period so that no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

ISOLATE non-load bearing metal framing to structure with double, deep-leg U-shaped slotted steel tracks typically.

SECTION 05 70 00 – DECORATIVE METAL

WORK INCLUDED: Provide ornamental metalwork, where indicated on the Drawings, as specified herein, and as necessary for complete installation. Types of applications include but are not limited to the following:

Metal Canopies or "Marquees"

SUBMITTALS

- Product Data: For each type of product indicated, including finishing materials.
- Shop Drawings: Include plans, elevations, component details, and attachments to other work. Indicate materials and profiles of each ornamental metal member, fittings, joinery, finishes, fasteners, anchorages, and accessory items.
- Provide templates for anchors and bolts specified for installation under other Sections.

QUALITY ASSURANCE

FABRICATOR QUALIFICATIONS: A firm experienced in producing ornamental metal similar to that indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

WELDING: Qualify procedures and personnel according to the following:

AWS D1.1, "Structural Welding Code--Steel."

PROJECT CONDITIONS

FIELD MEASUREMENTS: Verify actual locations of walls and other construction contiguous with ornamental metal by field measurements before fabrication and indicate measurements on Shop Drawings.

ESTABLISHED DIMENSIONS: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating railings without field measurements. Coordinate wall and other contiguous construction to ensure that actual dimensions correspond to established dimensions. If practical, provide allowance for trimming and fitting at site.

COORDINATION

COORDINATE INSTALLATION OF ANCHORAGES for ornamental metal items. 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.

PROVIDE MATERIALS with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

FERROUS METALS

- Steel Plates, Shapes, and Bars: ASTM A 36
- Steel Tubing: Cold-formed steel tubing complying with ASTM A 500.
- Castings: Either gray or malleable iron, unless otherwise indicated.
- Gray Iron: ASTM A 48, Class 30, unless another class is indicated or required by structural loads.
- Malleable Iron: ASTM A 47.

FASTENERS

- Fastener Materials: Unless otherwise indicated, provide the following:
- Uncoated Steel Items: Plated steel fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating where concealed, Type 304 stainless-steel fasteners where exposed.
- Dissimilar Metals: Type 304 stainless-steel fasteners.
- Fasteners for Anchoring to Other Construction: Unless otherwise indicated, select fasteners of type, grade, and class required to produce connections suitable for anchoring indicated items to other types of construction indicated.
- Provide concealed fasteners for interconnecting components and for attaching ornamental metal items to other work, unless otherwise indicated.
- Anchors: Provide anchors, fabricated from corrosion-resistant materials with capability to sustain, without failure, a load equal to six times the load imposed when installed in unit masonry and equal to four times the load imposed.

(Specifications continued in next column)

MISCELLANEOUS MATERIALS

WELDING RODS AND BARE ELECTRODES: Select according to AWS specifications for metal alloy welded. For aluminum, provide type and alloy as recommended by producer of metal to be welded and as required for color match, strength, and compatibility in fabricated items.

SHOP PRIMER FOR GALVANIZED STEEL: Zinc-dust, zinc-oxide primer formulated for priming zinc-coated steel and for compatibility with finish paint systems indicated, and complying with SSPC-Paint 5.

Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in steel, complying with SSPC-Paint 20.

ORNAMENTAL METAL FABRICATION:

Assemble items in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

Form ornamental metal to required shapes and sizes, true to line and level with true curves and accurate angles and surfaces. Finish exposed surfaces to smooth, sharp, well-defined lines and arris.

- Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- Form simple and compound curves in bars and extruded shapes by bending members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces.

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. Mill joints to a tight, hairline fit. Cope or miter corner joints. Fabricate connections that will be exposed to weather in a manner to exclude water.

Provide weep holes where water may accumulate. Provide necessary rebates, lugs, and brackets to assemble units and to attach to other work. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items, unless otherwise indicated.

Comply with AWS for recommended practices in shop welding. Weld behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded joints of flux, and dress exposed and contact surfaces.

WELDING: Interconnect members with full-length, full-penetration welds, unless otherwise indicated. Use welding method appropriate for metal and finish indicated and that develops full strength of members joined. Finish exposed welds and surfaces smooth, flush, and blended to match adjoining surfaces.

BRACKETS, FITTINGS, AND ANCHORS: Provide wall brackets, fittings, and anchors to connect units to other work, unless otherwise indicated. Furnish inserts and other anchorage devices to connect units to substrate. Coordinate anchorage devices with supporting structure.

FINISHES, GENERAL

COMPLY WITH NAAMM'S "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Protect finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

STEEL AND IRON FINISHES

Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes. Finish metal fabrications after assembly.

STEEL AND IRON FINISHES: Provide hot-dipped galvanized finish typically for all exterior ornamental steel, to comply with applicable standard listed below:

- ASTM A 123, for galvanizing steel and iron products.
- ASTM A 153, for galvanizing steel and iron hardware.

Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with minimum requirements indicated below for SSPC surface-preparation specifications and environmental exposure conditions of installed metal fabrications:

- Exteriors (SSPC Zone 1B): SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
- Interiors (SSPC Zone 1A): SSPC-SP 3, "Power Tool Cleaning."

Apply shop primer to uncoated surfaces of metal fabrications, except those with galvanized finishes and those to be embedded in concrete, sprayed-on fireproofing, or masonry, unless otherwise indicated. Comply with SSPC-PA 1, "Paint Application Specification No. 1," for shop painting. Stripe paint corners, crevices, bolts, welds, and sharp edges.

EXECUTION

EXAMINE SUBSTRATES AND CONDITIONS, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of ornamental metal. Proceed with installation only after unsatisfactory conditions have been corrected.

PROVIDE ANCHORAGE DEVICES and fasteners where needed to secure ornamental metal to in-place construction.

PERFORM CUTTING, DRILLING, AND FITTING REQUIRED to install ornamental metal. Set products accurately in location, alignment, and elevation; measured from established lines and levels. Provide temporary bracing or anchors in formwork for items to be built into concrete, masonry, or similar construction.

FIT EXPOSED CONNECTIONS ACCURATELY TOGETHER to form tight, hairline joints or, where indicated, with uniform reveals and spaces for sealants and joint fillers. Where cutting, welding, and grinding are required for proper shop fitting and jointing of ornamental metal, restore finishes to eliminate evidence of such corrective work.

DO NOT CUT OR ABRADE FINISHES that cannot be completely restored in the field. Return items with such finishes to the shop for required alterations, followed by complete refinishing, or provide new units as required.

Install concealed gaskets, joint fillers, insulation, and flashings as work progresses.

RESTORE PROTECTIVE COVERINGS that have been damaged during shipment or installation. Remove protective coverings only when there is no possibility of damage from other work yet to be performed at same location.

CORROSION PROTECTION: Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.

INSTALLING ORNAMENTAL AWNINGS:

MOUNT UNITS AT HEIGHTS and in positions indicated. Secure to framing and blocking with specified fasteners.

CLEANING

CLEAN METALS BY WASHING THOROUGHLY with clean water and soap, rinsing with clean water, and drying with soft cloths, unless otherwise recommended by the fabricator or metal finish manufacturer.

TOUCHUP PAINTING: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material.

GALVANIZED SURFACES: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

PROTECTION

PROTECT FINISHES OF ORNAMENTAL METAL from damage during construction period with temporary protective coverings approved by ornamental metal fabricator. Remove protective covering at time of Substantial Completion.

RESTORE FINISHES DAMAGED DURING INSTALLATION and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

SECTION 06 10 00 – ROUGH CARPENTRY

PROVIDE wood nailers, blocking, backing, and plywood required for completion of the Work, which is generally not exposed; where noted on the Drawings, and as specified herein.

LUMBER: Comply with PS 20 of "American Softwood Lumber Standard" and with applicable grading rules of inspection agencies certified by the ALSC board of Review. Provide dressed lumber, S4S typically, seasoned with 19% moisture content for sizes 2" or less.

FIRE-RETARDANT TREATED WOOD: Provide fire-labeled wood with minimum flame spread rating of 25, at the following locations: (1) blocking concealed within metal framed drywall partitions in non-combustible construction; (2) framing & blocking located above finished ceilings; and (3) blocking within fire-rated demising walls.

PLYWOOD BACKING PANELS: For mounting electrical or telephone equipment, provide fire- retardant treated plywood, APA C-D PLUGGED INT with exterior glue, 3/4" thick. Provide minimum 3/4" plywood, or 2 x lumber material as a minimum for backing at grab bars.

(Specifications continued in next column)

FASTENERS AND ANCHORS: Provide size, type material and finish as recommended by applicable standards. Provide fasteners and anchorages with a hot-dip zinc coating meeting ASTM A-153.

PRESERVATIVE TREATMENT: Water borne preservatives complying with AWPB LP-2, kiln-dried to 19% maximum moisture content for lumber and 15% for plywood. Treat wood cants, nailers, curbs, blocking, stripping and similar members in connection with roofing, flashing, vapor barriers and waterproofing. Treat wood sills, sleepers, blocking, furring, stripping and similar concealed members in contact with masonry or concrete.

DISCARD UNITS of material with defects which might impair quality of work, and units which are too small to use in fabricating work with minimum joints or optimum joint arrangement.

SET rough carpentry Work accurately to required levels and lines, with members plumb and true and accurately cut and fitted. Securely attach carpentry Work to substrate by anchoring and fastening as required. Use common wire nails, except as otherwise indicated. Use finishing nails for finish work. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood; predrill as required. Anchor and nail as shown, and to comply with Table 2304.9.1 – Fastening Schedule of the International Building Code.

SECTION 06 16 00 – SHEATHING

PART 1 _ GENERAL

RELATED DOCUMENTS: The Drawings, and general provisions of the Contract, including the General and Supplementary Conditions, and Division-1 Sections of the Specifications, apply to this Section.

WORK INCLUDED: Provide sheathing materials, including joint and penetration treatment, where indicated on the Drawings, as specified herein, and as necessary for complete installation. Types of applications include but are not limited to the following:

- Plywood wall sheathing anchored to light-gage framing
- Glass-Mat gypsum wall sheathing anchored to light-gage framing
- Glass-Mat gypsum primed roof-board sheathing on back side of parapets, anchored to light-gage framing

SUBMIT PRODUCT DATA for each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

PART 2 – PRODUCTS

PLYWOOD WALL SHEATHING: Comply with either DOC PS 1 or DOC PS 2, unless otherwise indicated, in thickness as needed to comply with requirements specified, but not less than that indicated on the Drawings. Factory mark panels to indicate compliance with applicable standard. Comply with the following:

- Grade: Exterior, Structural I sheathing.
- Span Rating: Not less than 16/0.
- Nominal Thickness: Not less than 1/2 inch.

GLASS-MAT GYPSUM SHEATHING: Provide material in compliance with ASTM C 1177 with glass mats both sides and on long edges, with water-resistant treated core:

- Product/Manufacturer: "Dens-Glass Gold" by G-P Gypsum Corporation.
- Thickness: 1/2 inch thick minimum, or as otherwise indicated on the Drawings
- Size: 48 wide by maximum height feasible (up to 120 inches) to minimize horizontal joints .

GLASS-MAT GYPSUM PRIMED ROOF-BOARD SHEATHING: (provide on back side of parapets in contact with roofing): Provide material in compliance with ASTM C 1177 with glass mats both sides and on long edges, with water-resistant treated core:

- Product/Manufacturer: "Dens-Deck Prime" by G-P Gypsum Corporation.
- Thickness: 1/2 inch thick minimum, or as otherwise indicated on the Drawings
- Size: 48 wide by maximum height feasible to minimize horizontal joints .

EXTERIOR GYPSUM SHEATHING PANELS FOR CEILINGS AND SOFFITS

- Soffit Panels: 1/2" thick "DensGlass Gold Exterior Guard" as manufactured by Georgia-Pacific in 4 foot wide panels by maximum length possible, complying with ASTM C 1177 with glass mats both sides and long edges, with water-resistant treated core.
- Joint Treatment: "G-P" Gypsum setting-type joint compound
- Anchors: Type S-12, bugle head, self-tapping, rust-resistant, fine thread for heavy-steel gauge.
- Sealant: Dow Corning 795, Pecora 895, GE Silicone Silpruf Sealant, or Tremco Dymonic
- Soffit Joint Tape: 2" wide 10 x 10 glass mesh Quick Tape or equivalent

FASTENERS:

PROVIDE FASTENERS in size and type that comply with requirements specified in this Article for material and manufacture, with hot-dip zinc coating complying with ASTM A 153 typically, and as follows:

- Nails, Brads, and Staples: ASTM F 1667.
- Power-Driven Fasteners: NES NER-272.
- Wood Screws: ASME B18.6.1.

SCREWS FOR FASTENING WOOD SHEATING TO METAL FRAMING: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened. Provide screws with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117.

SCREWS FOR FASTENING GYPSUM SHEATHING TO METAL FRAMING: Type S-12 bugle head self-tapping steel drill screws with fine thread for heavy-steel gage, in length recommended by sheathing manufacturer for thickness of sheathing board to be attached, with organic-polymer or other corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B 117. For steel framing from 0.033 to 0.112 inch thick, attach sheathing to comply with ASTM C 954.

SHEATHING JOINT-AND-PENETRATION TREATMENT MATERIALS

JOINT SEALANT FOR GLASS-MAT GYPSUM SHEATHING: Silicone emulsion sealant complying with ASTM C 834, compatible with sheathing tape and sheathing, and recommended by tape and sheathing manufacturers for use with glass-fiber sheathing tape and for covering exposed fasteners.

- Sealant: Dow Corning 795, Pecora 895, GE Silicone Silpruf Sealant, or Tremco Dymonic

SHEATHING TAPE FOR GLASS-MAT GYPSUM SHEATHING: Self-adhering glass-fiber quick-tape, minimum 2 inches wide, 10 by 10 threads/inch, of type recommended by sheathing and tape manufacturers for use with silicone emulsion sealant in sealing joints in glass-mat gypsum sheathing board and with a history of successful in-service use.

JOINT TREATMENT FOR GLASS-MAT GYPSUM SOFFITS: "G-P" Gypsum setting-type joint compound with 2" wide 10 x 10 glass mesh.

PART 3 – EXECUTION

DO NOT USE MATERIALS WITH DEFECTS that impair quality of sheathing or pieces that are too small to use with minimum number of joints or optimum joint arrangement.

CUT SHEATHING MATERIALS AT ALL PENETRATIONS, edges, and other obstructions of work; fit tightly against abutting construction, unless otherwise indicated.

SECURELY ATTACH to substrate by fastening as indicated, complying with the following:

- NES NER-272 for power-driven fasteners.
- Table 2304.9.1, "Fastening Schedule," in ICC's "International Building Code."

COORDINATE SHEATHING INSTALLATION with flashing and joint-sealant installation requirements so these materials are installed in sequence and manner that prevent exterior moisture from passing through completed assembly. Do not bridge building expansion joints; cut and space edges of panels to match spacing of structural support elements. Coordinate sheathing installation with installation of materials installed over sheathing so sheathing is not exposed to precipitation or left exposed at end of the workday when rain is forecast.

WOOD SHEATHING PANEL INSTALLATION: Comply with applicable recommendations in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated. Comply with "Code Plus" installation provisions in guide referenced in paragraph above. Fasten panels as follows:

- Apply a continuous bead of glue to framing members at edges of wall sheathing panels.
- Screw to cold-formed metal framing.
- Space panels 1/8 inch apart at edges and ends.

GYPSUM SHEATHING & SOFFIT INSTALLATION:

COMPLY WITH GA-253 and with manufacturer's written instructions. Fasten gypsum sheathing to cold-formed metal framing with screws. Install boards with a 3/8-inch gap where non-load-bearing construction abuts structural elements. Install boards with a 1/4-inch gap where they abut masonry or similar materials that might retain moisture, to prevent wicking. Apply fasteners so heads bear tightly against face of sheathing boards but do not cut into facing.

INSTALL WITH VERTICAL EDGES of boards centered over studs to minimize horizontal joints to the greatest extent feasible. Abut ends and edges of each board with those of adjacent boards. Attach boards at perimeter and within field of board to each stud.

SPACE FASTENERS approximately 8 inches o.c. and set back a minimum of 3/8 inch from edges and ends of boards. For sheathing under self-furring metal lath, boards may be initially tacked in place with screws if overlying metal lath is screw-attached through sheathing to studs immediately after sheathing is installed.

SHEATHING JOINT-AND-PENETRATION TREATMENT

(Specifications continued in next column)

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RELATED DOCUMENTS: This Drawing is a single component of an integrated set of Construction Documents. General and Supplementary Conditions of the Contract, General Requirements, Specifications and other Drawings may affect the Work described. Failure to review and integrate the design intent of the whole of the Construction Documents does not relieve the Contractor from providing a complete Project.

COMPLY WITH all laws, codes, ordinances and regulations with authorities having jurisdiction and with requirements of the Landlord, if applicable. Do not start Work until all permits and required approvals are obtained.

VERIFY ACTUAL CONDITIONS and dimensions prior to construction. Commencement of work constitutes verification and acceptance of all existing conditions. Application of a material or equipment item to Work installed by others constitutes acceptance of that Work, and assumption of responsibility for satisfactory installation.

DIMENSIONS SHOWN are to finish face of a material unless otherwise indicated.

CONTRACTOR'S NOTES: Written dimensions hold preference over scaled dimensions. Do not scale the drawings. The contractors must visit job site to verify all existing conditions and dimensions before submitting bids. Report any discrepancies of any conditions which may interfere with the proper execution of the contract to the tenant's representative. Report discrepancies during bidding process and before start of construction. Change orders will not be approved for issues arising from the field conditions or conflicts between the plans and the existing conditions.

projecttitle

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BUFORD, GEORGIA 30519

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