

SECTION 06 10 00

ROUGH CARPENTRY
06/07

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN FOREST & PAPER ASSOCIATION (AF&PA)

AF&PA T10 (2001) Wood Frame Construction Manual for One- and Two-Family Dwellings

AF&PA T101 (2001) National Design Specification (NDS) for Wood Construction

AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)

AITC 111 (1979) Recommended Practice for Protection of Structural Glued Laminated Timber During Transit, Storage and Erection

AITC A190.1 (2002) Structural Glued Laminated Timber

AITC OT-01 (2004) Timber Construction Manual

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI B18.2.1 (1996; Errata 2003) Square and Hex Bolts and Screws Inch Series

ANSI B18.5.2.1M (1981; R 1995) Metric Round Head Short Square Neck Bolts

ANSI B18.6.1 (1981; R 1997) Wood Screws (Inch Series)

AMERICAN WOOD-PRESERVERS' ASSOCIATION (AWPA)

AWPA C1 (2003) All Timber Products - Preservative Treatment by Pressure Processes

AWPA C2 (2003) Lumber, Timber, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Processes

AWPA C9 (2003) Plywood - Preservative Treatment by Pressure Processes

AWPA C28	(2003) Standard for Preservative Treatment of Structural Glued Laminated Members and Lamination Before Gluing of Southern Pine, Coastal Douglas Fir, Hemfir and Western Hemlock by Pressure Processes
AWPA P5	(2001; R 2005) Standard for Waterborne Preservatives
AWPA T1	(2004; R 2005) Use Category System: Processing and Treatment Standard
AWPA U1	(2004; R 2005) Use Category System: User Specification for Treated Wood

APA - THE ENGINEERED WOOD ASSOCIATION (APA)

APA E30	(2003) Engineered Wood Construction Guide
APA E445S	(2001; R 2002) Performance Standards and Policies for Structural-Use Panels (APA PRP-108)
APA EWS R540C	(1995; R 1996) Builder Tips Proper Storage and Handling of Glulam Beams
APA EWS T300E	(2002) Technical Note: Glulam Connection Details
APA F405L	(1999) Performance Rated Panels

ASME INTERNATIONAL (ASME)

ASME B18.2.2	(1987; R 1999) Square and Hex Nuts
ASME B18.5.2.2M	(1982; R 2000) Metric Round Head Square Neck Bolts

ASTM INTERNATIONAL (ASTM)

ASTM A 307	(2004) Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength
ASTM A 653/A 653M	(2004a) Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A 687	(1993) High-Strength Nonheaded Steel Bolts and Studs
ASTM C 79/C 79M	(2004a) Treated Core and Nontreated Core Gypsum Sheathing Board
ASTM F 1667	(2003) Driven Fasteners: Nails, Spikes,

and Staples

ASTM F 547 (2001) Nails for Use with Wood and Wood-Base Materials

FM GLOBAL (FM)

FM DS 1-49 (2000) Perimeter Flashing

GREEN SEAL (GS)

GS-36 (2000) Commercial Adhesives

INTERNATIONAL CODE COUNCIL (ICC)

ICC IBC (2003) International Building Code

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD)

SCAQMD Rule #1168 (1989; R 2005) Adhesive and Sealant Applications

SOUTHERN PINE INSPECTION BUREAU (SPIB)

SPIB 1003 (2002) Standard Grading Rules for Southern Pine Lumber

TRUSS PLATE INSTITUTE (TPI)

TPI 1 (2002) National Design Standard for Metal Plate Connected Wood Truss Construction; Commentary and Appendices

TPI HIB (1991) Commentary and Recommendations for Handling, Installing and Bracing Metal Plate Connected Wood Trusses

U.S. DEPARTMENT OF COMMERCE (DOC)

PS1 (1995) Construction and Industrial Plywood (APA V995)

PS2 (1992) Wood-Based Structural-Use Panels (APA 5350)

PS20 (1999) American Softwood Lumber Standard

U.S. GENERAL SERVICES ADMINISTRATION (GSA)

CID A-A-1923 (Rev A; Notice 1) Shield, Expansion (Lag, Machine and Externally Threaded Wedge Bolt Anchors)

CID A-A-1924 (Rev A; Notice 1) Shield, Expansion (Self

Drilling Tubular Expansion Shell Bolt Anchors

CID A-A-1925

(Rev A; Notice 1) Shield Expansion (Nail Anchors)

FS FF-B-588

(Rev E) Bolt, Toggle: and Expansion Sleeve, Screw

FS FF-T-1813

(Basic) Tack

FS UU-B-790

(Rev A) Building Paper, Vegetable Fiber: (Kraft, Waterproofed, Water Repellent and Fire Resistant)

1.2 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. The following shall be submitted in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-06 Test Reports

Preservative-treated lumber and plywood

1.3 DELIVERY AND STORAGE

Deliver materials to the site in an undamaged condition. Store, protect, handle, and install prefabricated structural elements in accordance with manufacturer's instructions and as specified. Store materials off the ground to provide proper ventilation, with drainage to avoid standing water, and protection against ground moisture and dampness. Store materials with a moisture barrier at both the ground level and as a cover forming a well ventilated enclosure. Store wood I-beams and glue-laminated beams and joists on edge. Adhere to requirements for stacking, lifting, bracing, cutting, notching, and special fastening requirements. Laminated timber shall be handled and stored in accordance with AITC 111 or APA EWS R540C. Remove defective and damaged materials and provide new materials. Store separated reusable wood waste convenient to cutting station and area of work.

1.4 GRADING AND MARKING

1.4.1 Lumber

Mark each piece of framing and board lumber or each bundle of small pieces of lumber with the grade mark of a recognized association or independent inspection agency. Such association or agency shall be certified by the Board of Review, American Lumber Standards Committee, to grade the species used. Surfaces that are to be exposed to view shall not bear grademarks, stamps, or any type of identifying mark. Hammer marking will be permitted on timbers when all surfaces will be exposed to view.

1.5 SIZES AND SURFACING

PS20 for dressed sizes of yard and structural lumber. Lumber shall be surfaced four sides. Size references, unless otherwise specified, are nominal sizes, and actual sizes shall be within manufacturing tolerances allowed by the standard under which the product is produced. Other measurements are IP or SI standard.

1.6 MOISTURE CONTENT

Air-dry or kiln-dry lumber. Kiln-dry treated lumber after treatment. Maximum moisture content of wood products shall be as follows at the time of delivery to the job site:

- a. Framing lumber and boards - 19 percent maximum
- b. Timbers 5 inches and thicker - 25 percent maximum

1.7 PRESERVATIVE TREATMENT

Treat wood products with waterborne wood preservatives conforming to AWPA P5.

Pressure treatment of wood products shall conform to the requirements of AWPA U1 and AWPA T1. Pressure-treated wood products shall not contain arsenic, chromium, or other agents classified as carcinogenic, probably carcinogenic, or possibly carcinogenic to humans (compounds in Groups 1, 2A, or 2B) by the International Agency for Research on Cancer (IARC), Lyon, France. Pressure-treated wood products shall not exceed the limits of the U.S. EPA's Toxic Characteristic Leaching Procedure (TCLP), and shall not be classified as hazardous waste. Submit certification from treating plant stating chemicals and process used and net amount of preservatives retained are in conformance with specified standards. Lumber and timber in accordance with AWPA C1 and AWPA C2, and plywood in accordance with AWPA C1 and AWPA C9.

Treat structural glued laminated timber in accordance with AWPA C1 and AWPA C28.

- a. 0.25 pcf intended for above ground use.
 - b. 0.40 pcf intended for ground contact and fresh water use. 0.60 pcf intended for Ammoniacal Copper Quaternary Compound (ACQ)-treated foundations. 0.80 to 1.00 pcf intended for ACQ-treated pilings. All wood shall be air or kiln dried after treatment. Specific treatments shall be verified by the report of an approved independent inspection agency, or the AWPA Quality Mark on each piece. Minimize cutting and avoid breathing sawdust. Brush coat areas that are cut or drilled after treatment with either the same preservative used in the treatment or with a 2 percent copper naphthenate solution.
1. Wood framing, woodwork, and plywood up to and including the subflooring at the first-floor level of structures having crawl spaces when the bottoms of such items are 24 inches or less from the earth underneath.
 2. Wood members that are in contact with water.

- 3. Exterior wood steps, platforms, and railings; and all wood framing of open, roofed structures.
- 4. Wood sills, soles, plates, furring, and sleepers that are less than 24 inches from the ground, furring and nailers that are set into or in contact with concrete or masonry.
- 5. Nailers, edge strips, crickets, curbs, and cants for roof decks.

1.8 QUALITY ASSURANCE

1.8.1 Drawing Requirements

For fabricated structural members, trusses, glulam members, indicate materials, details of construction, methods of fastening, and erection details. Include reference to design criteria used and manufacturers design calculations. Submit drawings for all proposed modifications of structural members. Do not proceed with modifications until the submittal has been approved.

1.8.2 Data Required

Submit calculations and drawings for all proposed modifications of structural members. Do not proceed with modifications until the submittal has been approved.

PART 2 PRODUCTS

2.1 MATERIALS

2.2 LUMBER

2.2.1 Structural Lumber

Design of members and fastenings shall conform to AITC OT-01. Other stress graded or dimensioned items such as blocking, carriages, and studs shall be standard or No. 2 grade except that studs may be Stud grade.

2.2.2 Framing Lumber

Framing lumber such as plates, caps, collar beams, cant strips, bucks, sleepers, nailing strips, and nailers and board lumber such as roof sheathing shall be one of the species listed in the table below. Minimum grade of species shall be as listed.

Table of Grades for Framing and Board Lumber

<u>Grading Rules</u>	<u>Species</u>	<u>Framing</u>	<u>Board Lumber</u>
SPIB 1003 standard grading rules	Southern Pine	Standard Light Framing or No. 3 Structural Light Framing	No. 2 Boards

Table of Grades for Framing and Board Lumber

<u>Grading Rules</u>	<u>Species</u>	<u>Framing</u> (Stud Grade for 2x4 nominal size, 10 feet and shorter)	<u>Board Lumber</u>
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2.2.3 Structural Glued Laminated Timber

AITC A190.1, size and type as indicated on drawings. Members shall be complete with hardware for joining laminated members and for their connection to other construction.

2.3 PLYWOOD, STRUCTURAL-USE, AND ORIENTED STRAND BOARD (OSB) PANELS

PS1, PS2, APA E445S, and APA F405L respectively.

2.3.1 Roof Sheathing

2.3.1.1 Plywood

C-D Grade, Exposure 1, with an Identification Index of not less than 24/0
Provide exterior grade particleboard with phenol resin for interior and exterior applications.

2.3.1.2 Structural-Use Panel

Sheathing grade with durability equivalent to Exposure 1, Span Rating of 24/0 or greater.

2.3.2 Diaphragms

2.3.2.1 Plywood

Structural I, C-D grade, Exposure 1, and a minimum thickness as indicated on drawings.

2.3.2.2 Structural-Use and OSB Panels

Sheathing grade with durability equivalent to Exposure 1 and a minimum thickness as indicated on drawings.

2.3.3 Shear Walls

2.3.3.1 Plywood

Structural I C-C Grade and a minimum thickness as indicated on drawings.

2.3.3.2 Structural-Use and OSB Panels

Sheathing grade with durability equivalent to Interior plywood with Exterior glue (Exposure 1) and a minimum thickness as indicated on drawings.

2.4 OTHER MATERIALS

2.4.1 Gypsum Wall Sheathing

ASTM C 79/C 79M, 1/2 inch thick, 4 feet wide with square edge for supports 16 inches o.c. with or without corner bracing of framing ; 2 feet wide with V-tongue and groove (T&G) edge for supports 16 inches o.c. with corner bracing of framing.

2.4.2 Building Paper

FS UU-B-790, Type I, Grade D, Style 1.

2.4.3 Trussed Rafters

Metal plate connected trusses designed in accordance with TPI 1 and TPI HIB and fabricated in accordance with TPI 1.

2.4.4 Miscellaneous Wood Members

2.4.4.1 Nonstress Graded Members

Members shall include bridging, corner bracing, furring, grounds, and nailing strips. Members shall be in accordance with TABLE I for the species used. Sizes shall be as follows unless otherwise shown:

Member	Size (inch)
Bridging	1 x 3 or 1 x 4 for use between members 2 x 12 and smaller; 2 x 4 for use between members larger than 2 x 12.
Corner bracing	1 x 4.
Furring	1 x 2 or 1 x 3.
Grounds	Plaster thickness by 1-1/2.
Nailing strips	1 x 3 or 1 x 4 when used as shingle base or interior finish, otherwise 2 inch stock.

2.4.4.2 Sill Plates

Sill plates shall be standard or number 2 grade.

2.4.4.3 Blocking

Blocking shall be standard or number 2 grade.

2.4.4.4 Rough Bucks and Frames

Rough bucks and frames shall be straight standard or number 2 grade.

2.4.5 Adhesives

Comply with applicable regulations regarding toxic and hazardous materials, [GS-36](#), [SCAQMD Rule #1168](#), and as specified. Use water-based adhesives with maximum VOC content of 15 grams/liter for all interior applications.

2.5 ROUGH HARDWARE

Unless otherwise indicated or specified, rough hardware shall be of the type and size necessary for the project requirements. Sizes, types, and spacing of fastenings of manufactured building materials shall be as recommended by the product manufacturer unless otherwise indicated or specified. Rough hardware exposed to the weather or embedded in or in contact with preservative treated wood, exterior masonry, or concrete walls or slabs shall be zinc-coated.

2.5.1 Bolts, Nuts, Studs, and Rivets

[ANSI B18.2.1](#), [ANSI B18.5.2.1M](#), [ASME B18.5.2.2M](#), [ASME B18.2.2](#), and [ASTM A 687](#).

2.5.2 Anchor Bolts

[ASTM A 307](#), size as indicated, complete with nuts and washers.

2.5.3 Expansion Shields

[CID A-A-1923](#), [CID A-A-1924](#), and [CID A-A-1925](#). Except as shown otherwise, maximum size of devices shall be 3/8 inch.

2.5.4 Lag Screws and Lag Bolts

[ANSI B18.2.1](#).

2.5.5 Toggle Bolts

[FS FF-B-588](#).

2.5.6 Wood Screws

[ANSI B18.6.1](#).

2.5.7 Nails

[ASTM F 547](#), size and type best suited for purpose. For sheathing and subflooring, length of nails shall be sufficient to extend 1 inch into supports. In general, 8-penny or larger nails shall be used for nailing through 1 inch thick lumber and for toe nailing 2 inch thick lumber; 16-penny or larger nails shall be used for nailing through 2 inch thick lumber. Nails used with treated lumber and sheathing shall be galvanized. Nailing shall be in accordance with the recommended nailing schedule

contained in [AF&PA T10](#). Where detailed nailing requirements are not specified, nail size and spacing shall be sufficient to develop an adequate strength for the connection. The connection's strength shall be verified against the nail capacity tables in [AF&PA T101](#). Reasonable judgment backed by experience shall ensure that the designed connection will not cause the wood to split. If a load situation exceeds a reasonable limit for nails, a specialized connector shall be used.

2.5.8 Wire Nails

[ASTM F 1667](#).

2.5.9 Tacks

[FS FF-T-1813](#).

2.5.10 Timber Connectors

Unless otherwise specified, timber connectors shall be in accordance with [TPI 1](#), [APA EWS T300E](#) or [AITC OT-01](#).

2.5.11 Clip Angles

Steel, [3/16 inch](#) thick, size best suited for intended use; or zinc-coated steel or iron commercial clips designed for connecting wood members.

2.5.12 Door Buck Anchors

Metal anchors, [1/8 by 1 1/4 inch](#) steel, [12 inches](#) long, with ends bent [2 inches](#), except as indicated otherwise. Anchors shall be screwed to the backs of bucks and built into masonry or concrete. Locate [8 inches](#) above sills and below heads and not more than [24 inches](#) intermediately between. Anchorage of bucks to steel framing shall be as necessary to suit the conditions.

2.5.13 Metal Bridging

Where not indicated or specified otherwise, No. 16 U.S. Standard gage, cadmium-plated or zinc-coated.

2.5.14 Toothed Rings and Shear Plates

[AF&PA T101](#).

2.5.15 Beam Anchors

Steel U-shaped strap anchors [1/4 inch](#) thick by [1 1/2 inches](#) wide, except as indicated otherwise.

2.5.16 Metal Framing Anchors

Construct anchors to the configuration shown using hot dip zinc-coated steel conforming to [ASTM A 653/A 653M](#), [G90](#). Except where otherwise shown, Steel shall be not lighter than 18 gage. Special nails supplied by the

manufacturer shall be used for all nailing.

2.5.17 Panel Edge Clips

Extruded aluminum or galvanized steel, H-shaped clips to prevent differential deflection of roof sheathing.

PART 3 EXECUTION

3.1 INSTALLATION

Conform to [AF&PA T10](#) and install in accordance with the [National Association of Home Builders \(NAHB\) Advanced Framing Techniques: Optimum Value Engineering](#), unless otherwise indicated or specified. Select lumber sizes to minimize waste. Fit framing lumber and other rough carpentry, set accurately to the required lines and levels, and secure in place in a rigid manner. Do not splice framing members between bearing points. Set joists, rafters, and purlins with their crown edge up. Frame members for the passage of pipes, conduits, and ducts. Do not cut or bore structural members for the passage of ducts or pipes without approval. Reinforce all members damaged by such cutting or boring by means of specially formed and approved sheet metal or bar steel shapes, or remove and provide new, as approved. Provide as necessary for the proper completion of the work all framing members not indicated or specified. Spiking and nailing not indicated or specified otherwise shall be in accordance with the Nailing Schedule contained in [ICC IBC](#); perform bolting in an approved manner. Spikes, nails, and bolts shall be drawn up tight. Timber connections and fastenings shall conform to [AF&PA T101](#).

3.1.1 Beams and Girders

Set beams and girders level and in alignment and anchor to bearing walls, piers, or supports with U-shaped steel strap anchors. Embed anchors in concrete or masonry at each bearing and through-bolt to the beams or girders with not less than two bolts. Provide bolts not less than [1/2 inch](#) in diameter and with plate washers under heads and nuts. Install beams and girders not indicated otherwise with [8 inch](#) minimum end bearing on walls or supports. Install beams and girders into walls with standard steel wall-bearing boxes. Provide joints and splices over bearings only and bolt or spike together.

3.1.2 Roof Framing or Rafters

Tops of supports or rafters shall form a true plane. Valley, ridge, and hip members shall be of depth equal to cut on rafters where practicable, but in no case less than depth of rafters and nominally [2 inches](#) thick. Rafters shall be notched and have full and solid bearing on plates. Valleys, hips, and ridges shall be straight and true intersections of roof planes. Necessary crickets and watersheds shall be formed. Rafters, except hip and valley rafters, shall be spiked to wall plate and to ceiling joists with no less than three 8-penny nails. Rafters shall be toe-nailed to ridge, valley, or hip members with at least three 8-penny nails. Rafters shall be braced to prevent movement until permanent bracing, decking or sheathing is installed. Hip and valley rafters shall be secured

to wall plates by clip angles. Openings in roof shall be framed with headers and trimmers. Unless otherwise indicated, headers carrying more than two rafters and trimmers supporting headers carrying more than one rafter shall be double. Hip rafters longer than the available lumber shall be butt jointed and scabbed. Valley rafters longer than the available lumber shall be double, with pieces lapped not less than 4 feet and well spiked together. Trussed rafters shall be installed in accordance with TPI HIB. Engineered wood joists shall be installed in accordance with distributor's instructions.

3.1.3 Wall Sheathing

3.1.3.1 Gypsum Sheathing Board

Apply gypsum sheathing board either horizontally or vertically. Butt joints and locate over the centerlines of supports. Horizontally applied sheathing shall be T&G, applied with tongued edge up. Stagger vertical joints and abut sheet closely to frames of openings. Nail sheathing with 11 gage, 3/8 inch head, zinc-coated nails 1 1/2 inches long for 1/2 inch sheathing and 1 3/4 inches long for 5/8 inch sheathing, spaced 3/8 inch minimum from edges. Provide 2 by 4 blocking for horizontal edges of 4 foot wide panels not otherwise supported.

- a. Gypsum Sheathing Board Used with Diagonal-Braced Framing: Sheathing shall be either 2 or 4 feet wide. Apply sheathing 2 feet wide horizontally. Nail 4 inches maximum o.c. at edges and over intermediate bearings. Apply sheathing 4 feet wide either horizontally or vertically. Nail 4 inches maximum o.c. at edges and 8 inches maximum o.c. at intermediate bearings.
- b. Gypsum Sheathing Board Used with Unbraced Frames: Sheathing shall be 4 feet wide and applied vertically. Extend sheathing over and nail to both sill and top plates. Nail 4 inches maximum o.c. at edges and 8 inches maximum o.c. at intermediate bearings.

3.1.4 Building Paper

Provide building paper where indicated. Apply paper shingle fashion, horizontally, beginning at the bottom of the wall. Lap edges 4 inches, and nail with one inch, zinc-coated roofing nails, spaced 12 inches o.c. and driven through tin discs.

3.1.5 Metal Framing Anchors

Provide framing anchors at every rafter or trussed rafter to fasten rafter or trussed rafter to plates and studs against uplift movement and forces as indicated. Anchors shall be punched and formed for nailing so that nails will be stressed in shear only. Nails shall be zinc-coated; drive a nail in each nail hole provided in the anchor.

3.1.6 Trusses

Metal plate connected wood trusses shall be handled, erected, and braced in accordance with TPI HIB and as indicated.

3.1.7 Structural Glued Laminated Timber Members

Brace members before erection. Align members and complete all connections before removal of bracing. Unwrap individually wrapped members only after adequate protection by a roof or other cover has been provided. Treat scratches and abrasions of factory applied sealer with two brush coats of the same sealer used at the factory.

3.1.8 Plywood and Structural-Use Panel Roof Sheathing

Install with the grain of the outer plies or long dimension at right angles to supports. Stagger end joints and locate over the centerlines of supports. Allow **1/8 inch** spacing at panel ends and **1/4 inch** at panel edges. Nail panels with 8-penny common nails or 6-penny annular rings or screw-type nails spaced **6 inches** o.c. at supported edges and **12 inches** o.c. at intermediate bearings. Do not use staples in roof sheathing. Where the support spacing exceeds the maximum span for an unsupported edge, provide adequate blocking, tongue-and-groove edges, or panel edge clips, in accordance with **APA E30**.

3.2 MISCELLANEOUS

3.2.1 Wood Roof Nailers, Edge Strips, Crickets, Curbs, and Cants

Provide sizes and configurations indicated or specified and anchored securely to continuous construction.

3.2.1.1 Roof Nailing Strips

Provide roof nailing strips for roof decks as indicated and specified herein. Apply nailing strips in straight parallel rows in the direction and spacing indicated.

- a. Surface-Applied Nailers: Shall be **3 inches** wide and of thickness to finish flush with the top of the insulation. Anchor strips securely to the roof deck with powder actuated fastening devices or expansion shields and bolts, spaced not more than **24 inches** o.c.

3.2.1.2 Roof Edge Strips and Nailers

Provide at perimeter of roof, around openings through roof, and where roofs abut walls, curbs, and other vertical surfaces. Except where indicated otherwise, nailers shall be **6 inches** wide and the same thickness as the insulation. Anchor nailers securely to underlying construction. Anchor perimeter nailers in accordance with **FM DS 1-49**.

3.2.1.3 Crickets, Cants, and Curbs

Provide wood saddles or crickets, cant strips, curbs for scuttles and ventilators.

3.2.2 Rough Wood Bucks

2 inch nominal thickness. Set wood bucks true and plumb. Anchor bucks to concrete or masonry with steel straps extending into the wall 8 inches minimum. Place anchors near the top and bottom of the buck and space uniformly at 2 foot maximum intervals.

3.2.3 Wood Blocking

Provide proper sizes and shapes at proper locations for the installation and attachment of wood and other finish materials, fixtures, equipment, and items indicated or specified.

3.2.4 Wood Grounds

Provide for fastening wood trim, finish materials, and other items to plastered walls and ceilings. Install grounds in proper alignment and true with an 8 foot straightedge.

3.2.5 Wood Furring

Provide where shown and as necessary for facing materials specified. Except as shown otherwise, furring strips shall be nominal one by 3, continuous, and spaced 16 inches o.c. Erect furring vertically or horizontally as necessary. Nail furring strips to masonry. Do not use wood plugs. Provide furring strips around openings, behind bases, and at angles and corners. Furring shall be plumb, rigid, and level and shall be shimmed as necessary to provide a true, even plane with surfaces suitable to receive the finish required. Form furring for cornices, offsets and breaks in walls or ceilings on 1 by 4 wood strips spaced 16 inches o.c.

3.2.6 Temporary Closures

Provide with hinged doors and padlocks and install during construction at exterior doorways and other ground level openings that are not otherwise closed. Cover windows and other unprotected openings with polyethylene or other approved material, stretched on wood frames. Provide dustproof barrier partitions to isolate areas as directed.

3.2.7 Temporary Centering, Bracing, and Shoring

Provide for the support and protection of masonry work during construction as specified in individual technical sections. Forms and centering for cast-in-place concrete work are specified in Section 03 30 00.00 20 CAST-IN-PLACE CONCRETE.

3.2.8 Diaphragms

Install plywood, structural-use, or OSB panels with the long dimension perpendicular to supports. End joints shall be staggered and located over the centerline of supports. Longitudinal joints shall be staggered] [and provided with blocking. Nail panels with 8-penny nails spaced not more than 6 inches on centers around the diaphragm boundaries and along continuous panel edges and 6 inches on centers at all other supported edges

and 12 inches o.c. over intermediate bearings.

3.2.9 Shear Walls

Install plywood or structural-use panels with long dimension parallel or perpendicular to supports. Provide blocking behind edges not located over supports. Nail panels with 8-penny nails spaced not more than 3 inches on centers along panel edges and 6 inches o.c. over intermediate bearings.

3.2.10 Bridging

Wood bridging shall have ends accurately bevel-cut to afford firm contact and shall be nailed at each end with two nails. Metal bridging shall be installed as recommended by the manufacturer. The lower ends of bridging shall be driven up tight and secured after roof sheathing has been laid.

3.2.11 Sill Plates

Sill plates shall be set level and square in steel channel and anchor bolted as indicated on drawings.

3.3 INSTALLATION OF TIMBER CONNECTORS

Installation of timber connectors shall conform to applicable requirements of AF&PA T101.

-- End of Section --