DIVISION 6 - WOOD AND PLASTICS

06100 ROUGH CARPENTRY

Part 1 GENERAL

1.01 RELATED DOCUMENTS

A. The drawings and general conditions of the contract including General and Supplementary Conditions and other Division 1 Specification sections apply to work of this section.

B. Examine all other sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.02 DESCRIPTION OF WORK:

A. Work Included: Provide labor, materials, and equipment necessary to complete the work of this Section, and without limiting the generality thereof furnish and install the following:

2. Wood framing, including joists, rafters, outriggers, scab-ons, headers, stringers, posts, studs, plates, truss bracing and similar members.

3. Wood grounds, nailers, blocking and sleepers.

4. Wood furring.

5. Plywood roof and wall sheathing.

6. Miscellaneous carpentry as indicated or required and not specified under other Sections of the Specifications.

7. Fasteners and accessories as indicated and required for rough carpentry.

8. Treated wood as specified.

B. Related Work Specified Elsewhere:

1. Finish carpentry: Section 06200.

2. Prefabricated wood trusses: Section 06190.

3. Metal studs: Section 05400.

4. Gypsum wall sheathing: Section 09250.

5. Underlayments: Division 7

6. Furnishing and installing of doors and frames: Division 8.

1.03 QUALITY ASSURANCE:

A. Codes and Standards: Comply with provisions of the latest edition of the following except where more stringent requirements are shown or specified:

1. International Building Code, 2003 Edition – International Code Council

2. ANSI/AF&PA (American Forest & Paper Association) – NDS National Design Specification for Wood Construction – Latest Edition

3. AHA (American Hardboard Association) A135.4 – Basic Hardboard.

4. ALSC (American Lumber Standards Committee) – Softwood Lumber Standards.

5. ANSI A208.1 – Mat-Formed Wood Particleboard.

6. APA (American Plywood Association).

7. AWPA (American Wood Preservers Association) C1-All Timber Products – Preservative Treatment by Pressure Process.

8. AWPA (American Wood Preservers Association) C20-Structural Lumber Fire Retardant Treatment by Pressure Process.

9. NELMA (New England Lumber Manufacturer's Association).

10. NFPA (National Forest Products Association).

11. SPIB (Southern Pine Inspection Bureau).

12. WCLIB (West Coast Lumber Inspection Bureau).

13. WWPA (Western Wood Products Association).

14. "Code of Federal Regulations, Part 1926" per the Occupational Safety and Health Administration (OSHA), Department of Labor (Latest Revision).

1.04 SUBMITTALS

A. Unless otherwise specified, submittals required in this section shall be submitted for review. Submittals shall be prepared and submitted in accordance with Division 1.

B. General Contractor shall submit a Submittal Schedule to the engineer within 30 days after they have received the Owner's Notice to Proceed.

C. All submittals shall be reviewed and returned to the Architect within 10 working days.

D. Incomplete submittals will not be reviewed.

E. Submittals not reviewed by the General Contractor prior to submission to the Engineer will not be reviewed. Include on the submittal statement or stamp of approval by Contractor, representing that the Contractor has seen and examined the submittal and that all requirements listed in sections Division 1have been complied with.

F. Engineer will review submittals a maximum of two review cycles as part of their normal services. If submittals are incomplete or otherwise unacceptable and re-submitted, General Contractor shall compensate Engineer for additional review cycles.

G. Panel Drawings: This project is design to be field constructed. If the contractor elects to use prefabricated wall, floor and/or roof panels, the panels shall meet or exceed the framing designed in the construction documents, and applicable code requirements. Review by the Architect and Engineer of panel shop drawings shall be performed at the contractor's expense.

H. Product Data: Submit producer's or manufacturer's specifications and installation instructions for the following products. Include laboratory test reports and other data to show compliance with specifications (including specified standards).

1. Engineered Wood Products

2. Pressure Treated Lumber

3. Sheathing

4. Samples of Exposed to View Wood Members: Submit two samples, 6 inches long, illustrating wood grain, stain, and finish.

5. Hangers, Hardware and Accessories

1.05 QUALITY ASSURANCE

A. Perform Work in accordance with the following agencies:

1. Lumber Grading Agency: Certified by NELMA.

2. Plywood Grading Agency: Certified by APA.

B. Grading stamp shall be on lumber and plywood.

C. In lieu of grade stamping for exposed to view lumber and plywood, submit manufacturer's certificate certifying that products meet or exceed specified requirements.

1.06 DELIVERY, STORAGE, AND PROTECTION

A. Protect materials from warping or other distortion by stacking to resist movement.

B. Follow manufacturer's recommendations for storage of Engineered Wood Products and connection hardware.

Part 2 PRODUCTS

2.01 LUMBER MATERIALS

A. Lumber, General: Factory-mark each piece of lumber with type, grade, mill and grading agency, except omit marking from surfaces to be exposed with transparent finish or without finish.

B. Nominal sizes are indicated, except as shown by detail dimensions. Provide actual sizes as required by PS 20, for moisture content specified for each use.

1. Provide dressed lumber, S4S, unless otherwise indicated.

2. Provide seasoned lumber with 19% maximum moisture content at time of dressing.

C. For structural framing (4" and wider and from 2" to 4" thick), provide the following grade and species:

1. Spruce-Pine-Fir (SPF) #1/2 or better, unless noted otherwise on Structural Drawings

2. Pressure treated lumber: Southern Yellow Pine #2 or better.

3. See structural drawings for grades and bending stress at specific locations.

D. Miscellaneous Lumber: Provide wood for support or attachment of other work including cant strips, bucks, nails, blocking, furring, grounds, stripping and similar members. Provide lumber of sizes indicated, worked into shapes shown, and as follows:

1. Moisture content: 19% maximum for lumber items not specified to receive wood preservative treatment.

2. Grade: Construction Grade light framing size lumber of any species or board size lumber as required. Provide construction grade boards (NELMA, or WCLB) or No.2 boards (SPIB, NELMA, or WWPA).

2.02 SHEATHING LOCATIONS

A. Roof Sheathing: APA rated, CDX, 5/8 inch thick, 48 x 96 inch sized sheets, square edges, unless noted.

B. Floor Sheathing: APA rated, CDX, 3/4 inch thick, 48 x 96 inch sized sheets, tongue and groove.

C. Wall Sheathing: APA rated, CDX, 1/2 inch thick, 48 x 96 inch sized sheets, square edges.

D. Wall Sheathing at Shear Walls: APA Rated Structural I, 48 x 96 inch sheets, square edges, unless noted otherwise.

E. Backing Panels: For mounting electrical or telephone equipment, provide fire-retardant-treated plywood panels per Code requirements. Paint as required by electrical code.

2.03 ENGINEERED WOOD PRODUCTS

A. General: Provide engineered wood products acceptable to authorities having jurisdiction and for which, current model code research or evaluation reports exist that evidence compliance with building code in effect for Project. Provide depths and widths as indicated.

1. Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis, and demonstrated by comprehensive testing performed by a qualified independent testing agency.

2. Source and Species: Unless otherwise indicated, lumber sources in Engineered Wood Products shall be of single source and species.

3. Adhesives shall be exterior type, complying with ASTM D2559.

4. Substitutions: Substitutions of Engineered Wood Products other than those specified will be permitted only with written certification from the manufacturer that the substituted items “meets or exceeds” all properties of the specified product, including engineering, serviceability, aesthetic and durability characteristics. Substitutions shall not be made without written approval of the Architect and Engineer.

B. Laminated-Veneer Lumber (LVL): Lumber manufactured by laminating wood veneers in a continuous press using an exterior-type adhesive complying with ASTM D *2559* to produce members with grain of veneers parallel to their lengths and complying with the following requirements:

Trust Joist MacMillan. F_b = 2600 psi, E = 1.9×10^6

C. Parallel-Strand Lumber (PSL): Lumber manufactured by laying up wood strands using an exterior-type adhesive complying with ASTM D 2559, and cured under pressure to produce members with grain of strands parallel to their lengths and complying with the following requirements:

Trus Joist MacMillan Fc_{II} = 2,900 psi, , F_b=2900 psi, E = 2.0 x 10^6

D. I-Joists: Meet manufacturer's standards for all properties and stiffness, for I-Joist series indicated.

Boise Cascade: BCI Series, as indicated on the drawings
Trus Joist MacMillan: TJI Series, as indicated on the drawings

E. Laminated Strand Lumber (LSL): Lumber manufactured by laying up wood strands using an exterior-type adhesive complying with ASTM D 2559, and cured under pressure to produce members with laminations of strands parallel to their lengths and complying with the following requirements:

Trus Joist MacMillan: F_b = 1,700 psi, E = 1.3 x 10^6 (depths to 8 5/8")
F_b=1,700 psi, E = 1.7 x 10^6 (depth 9 1/4" and up)

2.04 ACCESSORIES

A. Fasteners and Anchors:

1. Fasteners (for wood framing): Nail fasteners shall meet requirements of ASTM F1667.

2. Anchor Bolts: ASTM A307 headed and SSTB Anchor Bolts by Simpson StrongTie, unless noted otherwise.

3. Screw fasteners (where indicated on drawings or required to install connection hardware):

a. SD & SDS Screws by Simpson Strong Tie

b. RSS Screws by GRK Fasteners

c. Wood Screws: ANSI/ASME Standard B18.6.1

4. Lag Screws: ANSI/ASME Standard B18.2.1. Provide lead hole per NDS Chapter 11.

5. Through Bolts: ANSI/ASME Standard B18.2.1:

a. Holes for through bolts shall be a minimum of 1/32nd and a maximum of 1/16th larger than bolt diameter.

b. A standard cut washer shall be provided between the wood and bolt head, and wood and nut, unless noted otherwise.

B. Structural Framing Connectors, Hardware or Joist Hangers: As indicated on the drawings or sized to suit framing conditions, manufactured by Simpson or approved alternate.

1. Unless noted, fill all nail holes to achieve manufacturer's maximum reaction rating.

2. Use nail diameter and length as specified by connector manufacturer. Substitutions of pneumatic nails or "joist hanger" (no standard length) nails shall not be made without written authorization of the Engineer.

C. Construction Adhesive: APA AFG-01, approved for use with type of construction panel indicated

by both adhesive and panel manufacturer.

D. ALL ANCHORS, CONNECTORS AND FASTENERS IN CONTACT WITH PRESSURE TREATED LUMBER AND/OR AT EXTERIOR EXPOSURE SHALL HAVE COATINGS AS FOLLOWS, UNLESS NOTED OTHERWISE:

1. In marine environments and/or with treated wood containing ammonia, use stainless steel nails, fasteners and connection hardware, type 304 or 316. Verify ammonia content with treated wood manufacturer.

2. Anchor Bolts/Bolts/Lag Bolts: Hot Dipped Galvanized, ASTM A123

3. Connection Hardware, unless otherwise noted: Simpson Strongtie Z-Max (G185 per ASTM A653) or Hot Dipped Galvanized (HDG, ASTM A123). Use hot dipped galvanized fasteners, ASTM A153 with these hangers.

4. Nails and Fasteners, unless otherwise noted: Hot Dipped Galvanized, ASTM A153.

5. Proprietary pressure treated fastener coatings will be allowed only with written permission from the Architect and Engineer.

2.05 FACTORY WOOD TREATMENT

A. Wood Preservative (Pressure Treatment): AWPA Treatment, ACQ-C or ACQ-D.

B. The use of ACZA treated lumber is strictly prohibited.

C. CCA treated lumber will only be permitted with written authorization from the Architect.

D. Retention: 0.40 pcf.

E. See Section 2.04 for fastener, anchor and hardware requirements for use with pressure treated lumber.

F. Pressure treated lumber shall not contain ammonia unless authorized by the Architect and Engineer.

Part 3 EXECUTION

3.01 FRAMING

A. Set members level and plumb, in correct position.

B. Make provisions for erection loads, and for sufficient temporary bracing to maintain structure safe, plumb, and in true alignment until completion of erection and installation of permanent bracing.

C. Place horizontal members, crown side up.

D. Construct load bearing framing members fill length without splices.

E. Double members at openings over 24 inches wide. Space short studs over and under opening to stud spacing.

F. Place sill gasket directly on cementitious foundation. Puncture gasket clean and fit tight to protruding foundation anchor bolts.

G. Coordinate installation of wood decking, and prefabricated wood trusses.

H. Curb roof openings except where prefabricated curbs are provided. Form corners by alternating lapping side members.

I. Coordinate curb installation with installation of decking and support of deck openings, and roofing vapor retardant.

J. Rough Carpentry Fastening Schedule: Unless otherwise indicated on the drawings, provide minimum nailing and fastening per IBC Table 2304.9.1.

3.02 SHEATHING

A. Secure roof sheathing with longer edge perpendicular to framing members and with ends staggered and sheet ends over bearing provide gap between panels as recommended by manufacturer. Utilize H-clips at panel edges per manufacturer's recommendations or as indicated. Provide blocking where indicated on the Drawings.

B. Secure floor sheathing with longer edge perpendicular to framing members and with ends staggered and sheet ends over bearing. Secure tongue in groove per manufacturers instructions. Glue and nail/screw as indicated. Provide blocking where indicated on the Drawings. Floor sheathing shall be laid out in a manner to prevent squeaks.

C. Secure wall sheathing with long dimension perpendicular to wall studs, with ends over firm bearing and staggered.

D. Install telephone and electrical panel backboards with plywood sheathing material where required. Size as indicated or 6 inch larger than panel space required.

3.03 TOLERANCES

A. Framing Members: 1/4 inch from true position, maximum.

SECTION 06190 – METAL PLATE CONNECTED PRE-FABRICATED WOOD TRUSSES

Part 1 **GENERAL**

1.01 RELATED DOCUMENTS

A. The drawings and general conditions of the contract including General and Supplementary Conditions and other Division 1 Specification sections apply to work of this section.

B. Examine all other sections of the Specifications for requirements which affect work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all trades affecting or affected by work of this Section. Cooperate with such trades to assure the steady progress of all work under the Contract.

1.02 DESCRIPTION OF WORK:

A. Definition: Prefabricated wood trusses include planar structural units consisting of metal plate connected members which are fabricated from dimension lumber and which have been cut and assembled prior to delivery to the job site. Work to include anchorage, blocking,

curbing, miscellaneous framing and bracing.

B. Types of fabricated wood trusses are indicated on the drawings.

1.03 RELATED WORK SPECIFIED ELSEWHERE:

A. Section 06100 - Rough Carpentry

1.04 QUALITY ASSURANCE:

A. TPI Standards: Comply with applicable requirements and recommendations of the following Truss Plate Institute (TPI) publications:

1. ANSI/TPI 1-2002 “National Design Standard for Construction. Metal Plate Connected Wood Truss.”

2. ANSI/AF&PA (American Forest & Paper Association) – NDS National Design Specification for Wood Construction – Latest Edition

3. “Commentary and Appendices to ANSI/TPI 1-2002 for Bracing Wood Trusses.”

4. “Building Component Safety Information, BCSI 1-03”

4. DSB-89 “Recommended Design Specification for Temporary Bracing of Metal Plate Connected Wood Trusses.”

5. “Quality Assurance Procedures Manual for In-Plant Inspections, QAP-90.”

6. “Quality Control Manual.”

7. “Code of Federal Regulations, Part 1926” per the Occupational Safety and Health Administration (OSHA), Department of Labor (Latest Revision).

B. Wood Structural Design Standard: Comply with applicable requirements of "National Design Specification for Wood Construction", published by American Forest and Paper Association.

C. Lumber Standard: Comply with PS 20 and with applicable rules of the respective grading inspecting agencies for species and grade of lumber indicated.

D. Connector Plate Manufacturer's Qualifications: Provide truss connector plates manufactured by a firm which is a member of TPI and which complies with TPI quality control procedures for manufacture of connector plates published in TPI "Quality Control Manual."

E. Fabricator's Qualifications:

1. Provide trusses by a firm which has a record of successfully fabricating trusses similar to type and length indicated.

2. TPI Inspection Program: Fabricator shall participate in the TPI Quality Assurance Inspection Program, and maintain a copy of the Quality Assurance Procedures Manual, QAP-90. All trusses fabricated for this project shall bear the

TPI Registered Mark to indicate compliance with this program.

F. Uniformity of Manufacturer for Connector Plates: Provide metal connector plates form a single manufacturer.

1.05 SUBMITTALS:

A. Unless otherwise specified, submittals required in this section shall be submitted for review. Submittals shall be prepared and submitted in accordance with Division 1.

B. General Contractor shall submit a Submittal Schedule to the engineer within 30 days after they have received the Owner's Notice to Proceed.

C. All submittals shall be reviewed and returned to the Architect within 10 working days.

D. Incomplete submittals will not be reviewed.

E. Submittals not review by the General Contractor prior to submission the Engineer will not be reviewed. Include on the submittal a statement or stamp of approval by the Contractor, representing that the Contractor has seen and examined the submittal and that all requirements listed in sections Division 1 have been complied with.

F. Engineer will review submittals a maximum of two review cycles as part of their normal services. If submittals are incomplete or otherwise unacceptable and re-submitted, General Contractor shall compensate Engineer for additional review cycles.

G. **Truss design calculations without the appropriate signature and seal indicated below will be rejected and returned without review.**

H. Product Data: Submit fabricator's technical data covering lumber, metal plates, hardware, fabrication process, treatment (if any), handling and erection.

1. Submit certificate, signed by an officer of fabricating firm, indicating that trusses to be supplied for project comply with indicated requirements.

2. Submit evidence of participation in the TPI Inspection program.

I. Shop Drawings: Submit shop drawings, showing species, sizes and stress grade of lumber to be used; pitch, span, camber, configuration and spacing for each type of truss required; type size, material, finish, design value and location of metal connector plates; and bearing and anchorage details.

1. Truss Placement Plan: Provide drawings indicating truss layout.

a. Include all trusses and components, including girder trusses and

hangers.

b. Provided dimensions for layout, including bearing locations & widths, and truss spacing

2. Design: Design shall be in accordance with the applicable provisions of the latest edition of the American Forest & Paper Association's (AF& PA's) *National Design Specification for Wood Construction*, ANSI/TPI 1, and all applicable legal requirements. Submit the following information in the calculation submittal for each truss or truss component. **Calculations are to be prepared under the direct supervision of a Professional Engineer Registered in the State of Maine. Calculations shall be signed and sealed by a Professional Engineer Registered in the State of Maine.** Truss designer is responsible for the design of the entire truss assembly, including permanent lateral bracing. Lateral loads shall be resolved into the building lateral load resisting system.

a. Loading: Include all loadings applied to the truss, including uniform, concentrated loads and locations. Include effects of mechanical equipment, drifted and unbalanced snow. Indicate distribution of loads to top and bottom chords. The calculations shall clearly show these loads and their application to the trusses.

b. Load Combinations: The calculations shall list all load combinations including all factors that apply.

c. Adjustments to lumber and metal connector plate design values for conditions of use. Adjustment of value for duration of load or conditions of use shall be in accordance with AF& PA's *National Design Specification for Wood Construction.*

d. Truss-to-Truss Connections: Provide hanger designs where applicable. Provide design of connectors in multi-ply trusses.

e. Stress and Deflection calculations: Provide member stresses and joint displacement for each load and load combination, and displacement to span ratio. Indicate camber independently from displacement calculations. Provide bearing stresses at supports.

f. Reaction: Provide minimum and maximum reactions. Indicate the load combination that produces these reactions.

3. Truss Assembly Drawings: Provide drawings depicting how each truss is to be constructed. Provide all geometry, including length, height, joint locations, slope, camber, overhangs, metal plate connectors, and lumber grades

4. Permanent Member Bracing: The truss manufacturer shall specify all permanent bracing required for lateral support of tension and compression members, both webs and chords. Permanent bracing loads shall be resolved to the building lateral load resisting system. Provide strong back locations for parallel chord floor trusses.

1.06 DELIVERY, STORAGE, HANDLING:

A. Handle and store trusses with care, and in accordance with manufacturer's instructions and

TPI recommendations to avoid damage from bending, overturning or other cause for which truss is not designed to resist or endure.

B. Time delivery and erection of trusses to avoid extended on-site storage and to avoid delaying work of other trades whose work must follow erection of trusses.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS:

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering metal connector plates which may be incorporated in the work include, but are not limited to, the following:

Gang Nail Systems, Inc.
Hydro-Air Engineering, Inc.
Inter-Lock Steel Co., Inc.
Link-Wood Construction Systems
Robbins Manufacturing Co.
Tee-Lok Corp.
Truss Connectors of America
Truswall Systems Corp.

2.02 MATERIALS:

A. Lumber:

1. Factory mark each plate of lumber with type, grade, mill and grading agency.

2. Provide actual sizes as required by PS 20 for dressed limber, S4S, unless otherwise indicated. Minimum member sizes (nominal) are as follows:

a. Chord members, parallel chord trusses: 4x2 (“flat” orientation)
b. Web members: 4x2

3. Provide seasoned lumber with a maximum moisture content of 19% at time of dressing, and the moisture content of lumber shall be no less than 7% at time of manufacturing.

4. Lumber Species: Eastern Woods (Spruce) graded by NLGA, NELMA or NHPMA. Southern Pine graded by SPIB. Douglass Fir Larch graded by NLGA.

5. Lumber Grade:

a. Chord Members: MSR 1650f-1.5E lumber for all chords.

b. Web Members: No. 2 or better visually graded lumber for all webs. MSR lumber is acceptable in lieu of visually graded lumber for web members.

6. Stress Rating: Provide lumber which has been either graded or tested and certified, at indicated moisture content, to have the following minimum values:

a. MSR: Fb = 1650 psi, Ft = 1020 psi, Fc = 1700 psi, E = 1,500,000 psi
b. No.2: Fb = 875 psi, Ft = 450 psi, Fc = 1150 psi, E = 1,400,000 psi

7. Pressure treated lumber shall not be used.

B. Metal Connector Plates, Fasteners and Anchorages:

1. Connector Plate Material: Metal complying with following requirements, unless otherwise indicated: Not less that 0.036" thick, coated thickness, and shall meet or exceed ASTM A653/ASTMA653M grade 33. Working stresses in steel are to be applied to effectiveness ratios for plates as determined by test and in accordance with ANSI/TPI 1.

a. Galvanized Sheet Steel: ASTM A924/924M, Coating G60.

b. Electrolytic Zinc Coated Steel Sheet: ASTM A 591, Coating Class C, with minimum structural quality equivalent to ASTM A 446, Grade A.

C. Hangers: Hangers are to be designed and supplied as part of the truss package, and shall be manufactured by Simpson StrongTie.

2.03 FABRICATION:

A. Trusses shall be fabricated to meet the quality requirements of ANSI/TPI 1.

B. Cut truss members to accurate lengths, angles and sizes to produce close fitting joints with wood-to-wood bearing in assembled units.

C. Fabricate metal connector plates to size, configuration, thickness and anchorage details required for types of joint designs indicated.

D. Assemble truss members in design configuration indicated using jigs or other means to ensure uniformity and accuracy of assembly with close fitting joints. Position members to produce design camber indicated.

E. Connect truss members by means of metal connector plates accurately located and securely fastened to wood members by means indicated or approved.

F. Permanent web member bracing locations shall be marked on the truss members by means of a paint mark or tag of contrasting color. Tags shall not be removed without the permission of the Architect..

G. All trusses shall bear the TPI Registered Mark, The TPI Quality Stamp, indicating current participation with the in-plant inspection program per the standards established in QAP-90.

PART 3 - EXECUTION

3.01 GENERAL:

Erect and brace trusses to comply with recommendations of manufacturer and the Truss Plate Institute. Erection shall comply with current Occupational Safety & Health Administration (OSHA) requirements.

A. Inspect trusses for damage prior to erection. Apparent damage to trusses, if any, shall be reported to Truss Manufacturer prior to erection.

B. Truss Submittals and any supplementary information provided by the Truss Manufacturer shall be provided by the Contractor to the individual or organization responsible for the installation of the Trusses.

C. Erect trusses with plane of truss webs vertical (plumb) and parallel to each other, located accurately at design spacing indicated.

D. Hoist units in place by means of lifting equipment suited to sizes and types of trusses required, applied at designated lift points as recommended by fabricator, exercising care not to damage truss members or joints by out-of-plane bending or other causes.

E. Provide temporary bracing as required to maintain trusses plumb, parallel and in location indicated. TEMPORARY BRACING MUST BE PROVIDED IN THREE DIFFERENT PLANES OF THE TRUSS. BRACING SHALL BE INSTALLED ALONG THE BOTTOM CHORD, ALONG THE TOP CHORD AND WITHIN THE WEB MEMBERS. CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS OF SUMMARY SHEETS BCSI-B1/B2 FOR HANDLING, INSTALLING AND BRACING METAL CONNECTED WOOD TRUSSES. TEMPORARY BRACING SHALL BE LEFT IN PLACE AND BECOME PART OF THE PERMANENT BRACING FOR THE BUILDING. MAXIMUM BRACE SPACINGS INDICATED IN THIS DOCUMENT SHALL NOT BE EXCEEDED.

F. Modifications required to the temporary bracing to comply with permanent bracing requirements, if any, shall be noted on the Structural Contract Documents. Install necessary supplemental permanent bracing and related components to enable trusses to maintain design spacing, withstand live and dead loads including lateral loads, and to comply with other indicated requirements.

G. Anchor trusses securely at all bearing points to comply with methods and details indicated.

H. Do not cut, notch, bore, drill or remove truss members.

I. Metal plates shall not be removed and replaced. Plates that are not fully pressed into the wood shall not be repaired without the direction of the Truss Manufacturer. The Architect and Truss Manufacturer shall be notified of deficient metal plate installation. Repairs shall be submitted to the Architect for review prior to implementation.

SECTION 06401 - EXTERIOR ARCHITECTURAL WOODWORK, SIDING AND TRIM

Summary:

1. Provide Exterior Architectural Woodwork: including siding, soffits, fascia, ect…
2. Standing and running trim and rails.
3. Door Frames

Submittals:

1. Submit product data, samples, mockup of each type.

Products:

1. AWI Standards: Architectural Woodwork Institute (AWI) "Architectural Woodwork Quality Standards."
2. WIC Standards: Woodwork Institute of California (WIC) "Manual of Millwork."
4. Preservative Treatment: Nonpressure method, exterior type, NWWDA I.S. 4.
5. Vertical Shiplap Siding: 1 x 6 V-groove STK spruce
6. Exterior Standing and Running Trim and Rails:
    a. Species for Transparent Finish: B and Better, 1 and 2 Clear, western red cedar.
    b. Species for Opaque Finish: Select Pine.
    c. Grade: Custom.
    d. Texture: Surfaced all sides.
    e. Finish: As per drawings
7. Exterior Door Frames:
    a. Species for Transparent Finish: Match doors.
    b. Grade: Custom.
    c. Finish: As per drawings.
8. Auxiliary Materials:
    a. Nails: Stainless steel, aluminum or hot-dip galvanized siding nails.
    b. Screws and Anchors: Noncorrosive, type required for secure anchorage.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Comply with standards referenced.
3. Backprime work before installation.
4. Provide trim for scribing and site cutting.
5. Install work plumb, level and in proper alignment.
6. Provide work free from tool marks and blemishes.
7. Securely fasten to substrates.
8. Install in lengths to minimize joints and seams.
9. Color match wood for transparent finish at joints for uniform appearance.
10. Touch-up damaged or abraded finishes.
11. Back kerf-cut all 1 x 6 and greater to prevent cupping.

SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

Summary:

1. Provide Interior Architectural Woodwork:
    a. Standing and running trim and rails.
    b. Casework and countertops.
    c. Flush wood paneling and wainscots.
    d. Stairwork and rails.
    e. Door frames, glazed frames and framed openings.
    f. Shelving.

Submittals:

1. Submit product data, samples, mockup of each type.

Products:

1. AWI Standards: Architectural Woodwork Institute (AWI) "Architectural Woodwork Quality Standards."
2. WIC Standards: Woodwork Institute of California (WIC) "Manual of Millwork."
3. Interior Standing and Running Trim and Rails:
    a. Species for Transparent Finish: Rift sawn clear red oak.
    b. Species for Opaque Finish: Any closed-grain hardwood.
    c. Grade: Custom.
4. Interior Wood Casework:
    a. Species for Transparent Finish: Rift sawn clear red oak.
    b. Species for Opaque Finish: Closed grain hardwood.
    c. Grade: Custom.
    d. Face Style: To be chosen by architect.
    e. Veneer Matching of Leaves: Slip.
5. Casework Hardware and Auxiliary Materials:
    a. Hardware Standard: ANSI/BHMA A156.9
    b. Hardware Finish and Base Metal: Satin stainless steel
    c. Glass: Clear tempered glass, ASTM C 1048.
6. Interior Plastic Laminate Clad Countertops:
    a. Laminate: High pressure decorative laminate, NEMA LD-3.
    b. Grade: Custom.
    c. Core: Plywood
    d. Edge: Laminate
7. Solid Surfacing Material Countertops and Trim:
    b. Type: Synthetic countertops.
    c. Grade: Custom.
    d. Edge: Decorative.
8. Stone Countertops and Trim:
    a. Marble: Polished finish, ASTM C 503 dimensional tolerances.
    b. Granite: Polished finish, ASTM C 615 dimensional tolerances.
    c. Granite: Thermal finish, ASTM C 615 dimensional tolerances.
    d. Granite: Honed finish, ASTM C 615 dimensional tolerances.
9. Stairwork and Rails:
    a. Species for Transparent Finish: Rift sawn red oak.
    b. Species for Opaque Finish: Any closed-grain hardwood.
    c. Grade: Custom.
10. Interior Frames and Framed Openings:
    a. Species for Transparent Finish: Rift sawn red oak.
    b. Species for Opaque Finish: Any closed-grain hardwood.
    c. Grade: Custom.
11. Shelving:
    a. Species for Transparent Finish: Rift sawn red oak.
    b. Species for Opaque Finish: Hardwood veneer plywood with solid hardwood edgeband.
    c. Grade: Custom.
    d. Shelf Supports: Recessed slotted standards.
    e. Closet poles: Red oak.
12. All bedrooms: Provide California Closet system or equal.
13. Auxiliary Materials:
    a. Screws: FS FF-S-111, countersunk.

d. Nails: FS FF-N-105, countersunk.
e. Anchors: Type required for secure anchorage.

Installation:

1. Comply with requirements of Section 01000 - Project Requirements.
2. Comply with standards referenced.
3. Backprime work before installation.
4. Provide trim for scribing and site cutting.
5. Install work plumb, level and in proper alignment.
6. Provide work free from tool marks and blemishes.
7. Securely fasten to substrates.
8. Install in lengths to minimize joints and seams.
9. Color match wood for transparent finish at joints for uniform appearance.
10. Touch-up damaged or abraded finishes.
11. Kerf as required to prevent cupping.
12. Interior built-in shelving to be supported by mortised KV brackets with a 36" max. span.

END OF DIVISION 6