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This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Project Resource Manual* (PRM) including *MasterFormat*™, *SectionFormat*™ and *PageFormat*™. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies laminated veneer lumber (LVL) headers, beams and studs. These products are manufactured by Roseburg Forest Products. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat*™ for other section numbers and titles.

SECTION 06 17 13 LAMINATED VENEER LUMBER

PART 1 GENERAL

1.01 SUMMARY

- A. Section Includes: This Section specifies laminated veneer lumber (LVL) headers, beams and studs.

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

- B. Related Sections:
1. Connectors and Brackets, Anchor Bolts, Bearing Plate Anchors, and Hardware: Division 05 metal fabrication sections.
 2. Permanent Bridging and Bracing and Sheathing: Division 06 carpentry sections.
 3. Framing Connectors and Hangers: Division 06 carpentry sections.

Specifier Note: Paragraph below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain References Paragraph when specifying products and installation by an industry reference standard. List retained standard(s) referenced in this section alphabetically. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Contract Conditions or Section 01 42 00 - References may establish the edition date of standards. This Paragraph does not require compliance with standard(s). It is a listing of all references used in this section. Only include here standards that are referenced in the body of the specification in PARTS 1, 2 and/or 3. Do not include references to building codes at any level.

1.02 REFERENCE STANDARDS

- A. ASTM International (ASTM):
1. ASTM D5456 Standard Specification for Evaluation of Structural Composite Lumber Products.
 2. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.
- B. Canadian Construction Materials Centre (CCMC):
1. CCMC Report Number 13310-R.
- C. Forest Stewardship Council A.C. (FSC):
1. STD-40-003 Standard for Multi-site Certification of Chain of Custody Operations.

2. STD-40-004 V2.0 FSC Standard for Chain of Custody Certification.
 3. STD-40-005 V2.1 Standard for Company Evaluation of FSC Controlled Wood.
- D. ICC Evaluation Service Inc. (ICC-ES):
1. ICC-ES Report Number ESR-1210.

1.03 ADMINISTRATIVE REQUIREMENTS

- A. Coordination: Coordinate work of this Section with work of other trades for proper time and sequence to avoid construction delays. Comply with Section [01 31 00 - Project Management and Coordination].

Specifier Note: Add additional text to specify unusual or detailed coordination requirements affecting the work results of this Section.

1. [_____].

1.04 ACTION SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Section [01 33 00 - Submittal Procedures] [_____].
- B. Product Data: Submit for specified products as follows:
1. Manufacturer's product data, including descriptions of component materials, dimensions of specified products, design properties, allowable spans and construction details.
 2. Manufacturer's installation instructions.
 3. Catalog pages illustrating products to be incorporated into project.
 4. Material Safety Data Sheets (MSDS).

Specifier Note: Retain the following paragraph only if members are to be designed by the contractor.

- C. Shop Drawings: Submit drawings sealed by the designer indicating member types, sizes, locations and connection details.
- D. Design Data: Submit design calculations sealed by the designer for representative structural members.

Specifier Note: Article below should include prerequisites, standards, limitations and criteria that establish an overall level of quality for products and workmanship for this section. Coordinate article below with Division 01 Quality Assurance Section.

1.05 INFORMATION SUBMITTALS

Specifier Note: Specify submittal of test reports or evaluation service reports intended to document required tests without repeating the test requirements specified in Division 01.

- A. General: Submit listed submittals in accordance with Contract Conditions and Section [01 33 00 - Submittal Procedures].

Specifier Note: Specify submittals intended to document manufacturer installation, storage and other instructions.

- B. Manufacturer's Instructions: Submit manufacturer's [storage] [and] [_____] installation instructions.
- C. Source Quality Control: Submit documentation verifying that components and materials specified in this Section are from single manufacturer.

1.06 CLOSEOUT SUBMITTALS

- A. General: Submit listed submittals in accordance with Contract Conditions and Section [01 33 00 - Submittal Procedures].
1. Warranty Documentation: Submit warranty documents specified.

1.07 QUALITY ASSURANCE

Specifier Note: Retain paragraph below only if members are to be designed by the contractor.

- A. Designer Qualifications: A professional structural engineer registered in the [State of _____] [state where the project is located].

1.08 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Section [01 61 00 - Common Product Requirements] [_____].
- B. Delivery and Acceptance Requirements: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Unload material in accordance with manufacturer's recommendations.
- C. Storage and Handling Requirements: Handle and store materials in accordance with manufacturer's recommendations. Protect from exposure to harmful environmental conditions.
- D. Packaging Waste Management:

Specifier Note: The disposal of packaging waste into landfill sites demonstrates an inefficient use of natural resources and consumes valuable landfill space. Specifying appropriate packaging and construction waste management and disposal procedures may contribute to points required for USGBC's LEED® construction project certification.

Specifier Note: Include the following Subparagraphs to specify information that will provide direction to the Contractor for the disposal of construction waste materials using environmentally responsible methodology other than landfill resources.

- 1. Separate waste materials for [reuse] [and] [recycling] in accordance with [Section 01 74 19 - Construction Waste Management and Disposal].

Specifier Note: USGBC's LEED® certification includes credits for the diversion of construction waste from landfill. Diversion can be tracked by either weight or volume but must be consistent for all materials. Manufacturer may reclaim packaging and delivery materials for recycling.

- 2. Remove packaging materials from site and dispose of at appropriate recycling facilities.
- 3. Collect and separate for disposal [paper] [plastic] packaging material [in appropriate onsite bins] for recycling.
- 4. Fold metal and plastic banding; flatten and place in designated area for recycling.

Specifier Note: Add additional Subparagraphs to include pallets, crates, padding and other packing materials that are typically associated with the specified products.

- 5. Remove:
 - a. Pallets from site [and return to supplier or manufacturer].
 - b. [_____].

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal," "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 LAMINATED VENEER LUMBER

Specifier Note: Paragraph below is an addition to CSI *SectionFormat* and a supplement to MANU-SPEC. Retain or delete paragraph below per project requirements and specifier's practice.

- A. Manufacturer: Roseburg Forest Products.
 - 1. Contact: 10599 Old Hwy 99 South, Dillard, OR 97432; Telephone: (800) 245-1115; Fax: (541) 679-2543; E-mail: ewpsales@rfpc.com; website: www.roseburg.com.
 - 2. Single Source Responsibility: Provide components and materials specified in this section from a single manufacturer.

Specifier Note: Substitution procedures must appear either in the Contract Conditions or in Section 01 25 00 - Substitution Procedures. Do not include substitution procedures here.

- 3. Substitution Limitations:
 - a. Substitutions: [In accordance with [Contract Conditions] [Section 01 25 00 - Substitution Procedures] [No substitutions permitted].

Specifier Note: Include an overall description of the system, assembly, product or material. Include required properties or characteristics that do not obviously belong under other titles. Examples: Configuration, size and color.

B. Description:

Specifier Note: Paragraph below should list obligations for compliance with specific code requirements particular to this section. General statements to comply with a particular code are typically addressed in Contract Conditions and Section 01 41 00 - Regulatory Requirements. Repetitive statements should be avoided.

1. Regulatory Requirements:
 - a. In accordance with Section [01 41 00 - Regulatory Requirements].

Specifier Note: Select appropriate code reference below.

- b. Comply with ICC-ES Report Number ESR-1210.
 - c. Comply with CCMC Report Number 13310-R.
 - d. [_____].
2. Sustainability Characteristics:
 - a. Comply with the following FSC Standards:
 - 1) STD-40-003.
 - 2) STD-40-004 V2.0.
 - 3) STD-40-005 V2.1.
 - b. [_____].
3. Compatibility:
 - a. Ensure components and materials are compatible with specified accessories and adjacent materials.

Specifier Note: The term "Design Criteria" is used when describing the intended characteristics of a product for which the Contractor is assigned design responsibility. Retain Paragraph below only if members are to be designed by the contractor.

C. Design Criteria:

Specifier Note: Select and/or insert loading criteria to conform to project requirements.

1. Design Live [and Dead] Load for Floors: [_____] psf (kg/m²) with live load deflection limited to [1/600] [1/480] [1/360] [_____] of span or a maximum of [_____] inches of live load deflection and total load deflection limited to [1/360] [1/240] [1/180] of span or a maximum of [_____] inches of total load deflection.
2. Design Live [and Dead] Load for Roofs: [_____] psf (kg/m²) with live load deflection limited to [1/480] [1/360] [1/240] [_____] of span or a maximum of [_____] inches of live load deflection and total load deflection limited to [1/360] [1/240] [1/180] of span or a maximum of [_____] inches of total load deflection.

D. Materials:

1. Laminated Veneer Lumber: To ASTM D5456.
 - a. Laminated Veneer Lumber Studs: To ASTM E119.

Specifier Note: Retain type(s) below to conform to project requirements. If more than one is retained, create designators and coordinate with the drawings. If members are to be designed by the contractor, delete the next two paragraphs.

2. Plies: [1 ply] [2 ply] [3 ply] [4 ply].
3. Thickness: [1 1/2 inches (38 mm)] [1 3/4 inches (44 mm)] [3 1/2 inches (89 mm)] [5 1/4 inches (133 mm)] [7 inches (178 mm)].
4. Grade: [1.5E] [2.0E] RigidLam LVL.

Specifier Note: Insert height below unless indicated on the drawings.

- 5. Depth: [] [As indicated on drawings].

2.02 ACCESSORIES

Specifier Note: Retain fastener type below to conform to project requirements.

- A. Fasteners: [Galvanized steel] [Stainless steel], sized to suit application.
 - 1. Acceptable Manufacturers:
 - a. Simpson Strong-Tie.
 - b. USP Structural Connectors.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verification of Conditions: Verify that conditions of substrates previously installed under other sections or contracts are acceptable for product installation in accordance with manufacturer's instructions prior to [describe product] installation.
 - 1. Inform [Owner] [Architect] [Consultant] of unacceptable conditions immediately upon discovery.
 - 2. Proceed with installation only after unacceptable conditions have been remedied [and after receipt of written approval from [Owner] [Architect] [Consultant]].
 - 3. [_____].

3.02 INSTALLATION

- A. Coordinate installation of laminated veneer lumber (LVL) headers, beams and studs in accordance with Section [01 73 19 - Installation].
- B. Coordinate laminated veneer lumber (LVL) headers, beams and studs work with work of other trades for proper time and sequence to avoid construction delays.
- C. Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions and product carton instructions for installation.
- D. Install members plumb, level and as indicated.
- E. Fasten members to supporting framing as recommended by the LVL manufacturer and the hanger manufacturer.
- F. Provide temporary bracing to hold members in position until permanently secured.
- G. Cut holes in members only as allowed by the manufacturer.

3.03 CLEANING

- A. Perform cleanup in accordance with Section [01 74 00 - Cleaning and Waste Management] and Section [01 74 13 - Progress Cleaning].
- B. Upon completion and verification of performance of installation, remove surplus materials, rubbish, tools and equipment in accordance with Section [01 74 23 - Final Cleaning].

Specifier Note: Specify special measures needed to minimize waste, collect recyclable waste and dispose of or recycle field-generated construction waste created during demolition, construction or final cleaning.

- C. Waste Management:
 - 1. Coordinate recycling of waste materials with Section [01 74 19 - Construction Waste Management and Disposal].
 - 2. Collect recyclable waste and dispose of or recycle field generated construction waste created during demolition, construction or final cleaning.
 - 3. Remove recycling containers and bins from site.

END OF SECTION