Columbia PureBond® MPX®, domestic veneer core, particleboard core, MDF core or Classic Core® decorative hardwood plywood product construction specification in CSI 3-part format. FSC® Mix assemblies available at time of order placement. [FSC®-C017500.]

General Inquiry Contact Email:
https://www.columbiaforestproducts.com/contact-us/contact-columbia-forest-products/

SECTION 06 40 00

ARCHITECTURAL WOODWORK [Revised August 2021 with species, TSCA updates]

GENERAL NOTES TO SPECIFIER

THE FOLLOWING PRODUCT SPECIFICATION LANGUAGE IS INTENDED TO ASSIST SPECIFICATION OF FSC-CERTIFIED, FORMALDEHYDE-FREE DECORATIVE HARDWOOD PLYWOOD PANELS IN EXISTING 3-PART SPECIFICATIONS FOR PANELING, CASEWORK AND SIMILAR ARCHITECTURAL WOODWORK.

SAMPLE LANGUAGE IS PROVIDED FOR APPLICABLE ARTICLES IN PART 1. GENERAL, PART 2. — PRODUCTS AND PART 3. — EXECUTION FOLLOWING THE CONSTRUCTION SPECIFICATION INSTITUTE [CSI] FORMAT. THE SAMPLE LANGUAGE SHOULD BE EDITED ACCORDINGLY TO FIT EACH FIRM'S SPECIFICATION STANDARDS.

ARTICLES AND PARAGRAPHS OF THIS PRODUCT SPECIFICATION ASSUME THE PROJECT MANUAL WILL CONTAIN COMPLETE DIVISION 1 DOCUMENTS. CLOSE COORDINATION WITH DIVISION 1 SECTIONS IS REQUIRED. IF THE PROJECT MANUAL DOES NOT CONTAIN THESE SECTIONS. ADDITIONAL INFORMATION MAY BE INCLUDED UNDER THE APPROPRIATE ARTICLES.

NOTES TO THE SPECIFIER ARE IN UPPER CASE TEXT AND ARE CONTAINED IN CALLOUT BOXES SIMILAR TO THIS ONE. OPTIONAL ITEMS REQUIRING SELECTION BY THE SPECIFIER ARE ENCLOSED WITHIN BRACKETS. E.G: [30], [40], [45]. MAKE APPROPRIATE SELECTIONS AND DELETE OTHERS.

ITEMS REQUIRING ADDITIONAL INFORMATION ARE UNDERLINED BLANK SPACES. FOR EXAMPLE: _____

PART 1- GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General Conditions. Division 01 - General Requirements and other applicable specification sections in the Project Manual apply to the work specified in this Section.

1.2 SUMMARY

A. Scope: Provide labor. Material equipment-related services and supervision required, including but not limited to manufacturing, fabrication, erection and installation for architectural woodwork as required for the complete performance of the work and as shown on the Drawings and as herein specified.

1.3 REFERENCES

A. General: The publications listed below this Specification to the extent referenced. The publications are referred to in the text by the basic designation only. The edition/revision of the referenced publications shall be the latest date as of the date of the Contract Documents, unless otherwise specified.

B. American Wood Council (AWC):
1. AWC DCA1: "Design for Code Acceptance" https://awc.org/codes-standards/publications/dca1

C. Architectural Woodwork Institute (AWI)
1. AWI AWS: "Architectural Woodwork Standards" [Soon to be retired]
https://awiqcp.org/a-guide-to-the-architectural-woodwork-standards/
2. https://www.awinet.org/standards/standards-overview [New Casework Standard, Just Launched Spring 2020]

D. ASTM (ASTM):
1. ASTM D 523: "Standard Test Method for Specular Gloss"
2. ASTM E 84: "Standard Test Method for Surface Burning Characteristics of Building Materials"

E. Forest Stewardship Council (FSC): https://fsc.org/en/about-us
1. FSC STD-01-001: "FSC Principles and Criteria for Forest Stewardship"

F. Decorative Hardwoods Association (DHA): https://www.decorativehardwoods.org/
408749 DHP-HPVA 2021 WTB-WEB.pdf (decorativehardwoods.org)
1. ANSI/HP-1. "American National Standard for Hardwood and Decorative Plywood"
American National Standard for Hardwood and Decorative Plywood (ANSI/HPVA HP-1-2020) | DHA (decorativehardwoods.org)
2. HPVA HPH. "Hardwood Plywood Handbook"
https://www.decorativehardwoods.org/product/hardwood-plywood-handbook
3. HPVA VSG. "Veneer Species Guide"
https://www.decorativehardwoods.org/product/veneer-species-guide

1.4 SUBMITTALS

INCLUDE ANY OR ALL OF THE FOLLOWING PARAGRAPHS AS APPLICABLE TO THE PROJECT.

A. General: See Section 01 33 00 – Submittal Procedures.

B. Product Data: Submit product data showing material proposed. Submit sufficient information to determine compliance with the Drawings and Specifications. Submit product data for each type of product and process specified and incorporated into items of architectural woodwork during fabrication finishing and installation.

C. Shop Drawings: Submit shop drawings for each product and accessory required. Include information not fully detailed in manufacturer's standard product data, including, but not limited to, location of each item in dimensioned plans and elevations, large scale details, attachment devices and other components.

D. Samples:
1. Submit samples for initial selection. Submit samples of each specified finish. Submit samples in form of manufacturer's charts showing veneers and finishes available.

DELETE ABOVE IF COLORS, VENEERS, FINISHES, ETC.. PRESELECTED AND SPECIFIED OR SCHEDULED. RETAIN BELOW WITH OR WITHOUT ABOVE.

2. Submit samples for verification purposes. Additional samples may be required to show fabrication techniques and workmanship.

E. Quality Control Submittals:

INCLUDE BELOW IF APPLICABLE TO THE PROJECT.

1. Fire Retardant Treatment Data: Submit fire retardant treatment data for material treated to reduce combustibility. Raw panel production offered by Columbia Forest Products is Class C as defined by ASTM E84 Steiner Tunnel Test procedure. See link: Microsoft Word - Columbia Web Class C Assertion 08-21.docx (columbiaforestproducts.com)

INCLUDE BELOW IF APPLICABLE TO THE PROJECT:

FOR LEED" PROJECTS INCLUDE THE FOLLOWING, AS APPLICABLE. CREDITS REFERENCED PERTAIN TO LEED V4.

F. Submittals that are required to comply with requirements for LEED® V4 certification as defined by the U.S. Green Building Council (USGBC - www.usgbc.org) include, but shall not be limited to, the following:

1. Building Product Disclosure and Optimization – Environmental Product Declarations
   a. Available on composite cores and composite components only, expressed as by weight as a percentage of the panel assembly. EPD by domestic US hardwood plywood industry has not been undertaken and published.
   b. Apples and oranges, the EPD for composite panels does not weigh the composite fiber as it is claimed to be recycled, thus placing industry which generates first use of wood fiber an extraction penalty. EPDs used to choose ""winners" and "losers" is suspect: Understanding EPDs for Wood 9-24-13.pdf (sierraclub.org)

2. Building Product Disclosure and Optimization: Sourcing of Raw Materials
   a. FSC® Mix [Credit] through COC Distributor, NC-COC-000065
      i. Certificate: https://www.columbiaforestproducts.com/app/uploads/2019/06/Columbia-Forest-Products-FSC-COC-w_CW-Certificate-17.12.2018.pdf
      ii. Scope: https://info.fsc.org/details.php?id=a0240000005sUorAAE&type=certificate
      iii. Support on valuation of FSC Mix in project work by FSC US
         1. https://us.fsc.org/en-us/market/green-building/faqs-for-green-building
         2. https://us.fsc.org/en-us/market/green-building/fsc-continuing-education
   b. Pre-Consumer recycled wood content consistent with ISO 14021 claims available from board core suppliers as used in PureBond NAF pMDI MDF and PB core assemblies.
      i. Inquire with Columbia staff as each case is different.
      ii. Environmentally Certified Composite Program [ECC] not sufficient as it includes recovered "forest thinnings" which do not meet ISO 14021 definition as acceptable content. Caveat Emptor. Columbia simply passes these claims through from primary board core manufacturer and presses for ISO 14021 compliant claims it can share with specification community.
   c. No support for regional adder as extracted, manufactured and purchased within 100-mile radius in LEED V4 is impossible to meet with present supply chain, sourcing methods for composite panel production. Ridiculous Change, among others in LEED V4.
   d. Columbia PureBond production is compliant with TSCA Title VI, CARB requirements for NAF, ULEF emissions levels not to exceed 0.05 ppm as verified by Capital Testing, TPC-8. Columbia panel production is compliant with LEED V4.0 Composite Wood Evaluation which means HWPW held to a higher standard through lower upper limit emission levels in comparison to composites. Additional information on PureBond (Manufacturers Cut sheet for LEED 2009) is available here: 600-PureBond-Sheet-for-web-7-21-1.pdf (columbiaforestproducts.com)
      i. Chain of Custody paperwork through distributor provides bona fides for LEED project

documentation. Columbia's Certificates through Capital Testing provide a tie to brand name and are available here together with additional information on TSCA, CARB: https://www.columbiaforestproducts.com/library/information/carb-regulation-information/

ii. List of Executive NAF Executive Orders at Columbia are divided between veneer core (VC) and composite core (CC.) It takes some searching but the appropriate executive order can be located by Columbia plant, here (note there are multiple years in the listing...choose the year in which the material shipped if after the fact.): NAF/ULEF Executive Orders | California Air Resources Board

3. Building Product Disclosure and Optimization – Material Ingredients
   a. Domestic veneer core PureBond production is Declare® labeled which is a USGBC approved program defined as meeting the material ingredient reporting criteria.
      i. https://declare.living-future.org/products/hp-1-purebond-mpx-decorative-hardwood-plywood-unfinished
      ii. Declare label does not presently cover particleboard, MDF, Baltic birch or combi core options and are disclosed on a one-off basis once volume, and intent to purchase is confirmed.
   b. Columbia does not maintain an ingredient optimization certification at this time aside from elimination of formaldehyde and embrace of FSC and employee ownership of company. For us, the use of wood that is certified and the elimination of formaldehyde in favor of soy was a natural inclination, paying an organization to "optimize" operations they are otherwise not familiar with did not seem likely to generate a return and would compete with funds needed to keep Columbia operations modern and efficient.
   c. Columbia does not engage in a supply chain optimization program which is a cut out for extractive industry in LEED V4. See FSC Certified Wood for an example of supply chain optimization around legality, responsible stewardship of a renewable resource: wood.

1.5 QUALITY ASSURANCE

INCLUDE ANY OR ALL OF THE FOLLOWING PARAGRAPHS AS APPLICABLE TO THE PROJECT:

A. Regulatory Requirements: Comply with applicable requirements of the laws, codes, ordinances and regulations of Federal, state and local authorities having jurisdiction. Obtain necessary approvals from such authorities.

B. Quality Standard: Comply with AWI AWS for grades of architectural woodwork construction, finishes and other requirements. Provide AWI certification labels or AWI certificates of compliance indicating that woodwork meets requirements of grades specified.

Note: Columbia UV Wood™, clear acrylate UV cured finishes do not meet older AWS V2 standard for UV top coatings due to requirement for two layers of "topcoat" whereas Columbia's systems apply filler sealer and a final, single topcoat layer only. Thicker millage on LabCoat™ finish is what imparts elevated reagent stain resistance properties over standard UV Wood which is designed to resist stains in residential kitchen settings.

INCLUDE BELOW IF APPLICABLE TO THE PROJECT.

1. Comply with applicable requirements of standards published by the Scientific Equipment and Furniture Association

INCLUDE BELOW IF APPLICABLE TO THE PROJECT. COLUMBIA WILL APPLY FINE, DECORATIVE HARDWOOD AND SOFTWOOD VENEERS TO FIRE-TREATED COMPOSITE SUBSTRATES. COLUMBIA HAS NOT PERFORMED ANY TESTING TO DATE ON PANEL ASSEMBLIES FEATURING THE FIRE-RATED CORE. ANY CLAIMS OR STATEMENTS AS TO THE SURFACE BURNING CHARACTERISTICS OF THE PRODUCTS PROVIDED UNDER THIS SECTION ARE THE RESPONSIBILITY OF THE CONTRACTOR AND THE FABRICATOR AND THEY SHALL BE SOLELY RESPONSIBLE OR FURNISHING ANY TESTING OR CERTIFICATION REQUIRED TO VERIFY SAID CHARACTERISTICS. COLUMBIA PROVIDES NO INDEMNIFICATION TO ANY PARTY AND EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY, RELATING TO OR ARISING FROM THE USE OF COLUMBIA PRODUCTS IN ANY APPLICATION AS IT RELATES TO SURFACE BURNING CHARACTERISTICS BEYOND CLASS C PERFORMANCE.

C. Surface Burning Characteristics: Provide materials with the following characteristics as determined by testing identical products per ASTM test method indicated below. By Underwriters Laboratories. Inc. (UL), Intertek Testing Services (ITS), Capital Testing Laboratories or another inspecting and testing

agency acceptable to authorities having jurisdiction.

1. Surface burning characteristics shall not exceed values indicated below as tested per ASTM E 84.

FLAME SPREAD OF 200 OR BELOW FOR CLASS III (CLASS C) CODE REQUIREMENTS.

a. Flame Spread: 200.
b. Smoke Developed: 450.

2. Additional references here
   a. Microsoft Word - Columbia Web Class C Assertion 08-21.docx (columbiaforestproducts.com)
   b. https://awc.org/codes-standards/publications/dca1

D. Mock-Ups: Prior to installation of the work, fabricate and erect mock-ups for each type of finish and application required to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution. Build mock-ups using materials indicated for final unit of work.

E. Pre-Installation Conference: Conduct pre-installation conference in accordance with Section 01 3119 - Project Meetings. Prior to commencing the installation, meet at the Project site to review the material selections, installation procedures and coordination with other trades. Mock-ups shall be reviewed during the pre-installation conference. Pre-installation conference shall include but shall not be limited to, the Contractor, the Installer and any trade that requires coordination with the work. Date and time of the pre-installation conference shall be acceptable to the Owner and the Architect.

1.6 DELIVERY, STORAGE AND HANDLING

INCLUDE ANY OR ALL OF THE FOLLOWING PARAGRAPHS AS APPLICABLE TO THE PROJECT:

A. Deliver materials to the Project site in supplier's or manufacturer's original wrappings and containers (or suitable equivalent protection), labeled with supplier's or manufacturer's name, material or product brand name and lot number, if any.
B. Store decorative hardwood plywood and fabricated products in **dry**, interior locations where temperature is maintained between 60°F (16°C) and 90°F (32°C) and relative humidity is maintained between 30 percent and 55 percent.

C. Remove or loosen plastic wrappings. Sticker individual panels to hasten acclimatization.

D. Cover raw, decorative hardwood plywood from direct sunlight, strong UV lamp sources, including florescent bulbs.

E. Protect decorative hardwood plywood from edge and surface damage.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install work until building is enclosed, wet-work is completed and nominally dry and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

PART 2 - PRODUCTS

2.1 MATERIALS

FOR LEED V4 PROJECTS, INCLUDE THE FOLLOWING AS APPLICABLE. CREDITS REFERENCED PERTAIN TO LEED V4. SUBMITTALS THAT ARE REQUIRED TO COMPLY WITH REQUIREMENTS FOR LEED® V4 CERTIFICATION AS DEFINED BY THE U.S. GREEN BUILDING COUNCIL (USGBC - WWW.USGBC.ORG) INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING:

1. Building Product Disclosure and Optimization – Environmental Product Declarations

a. Available on composite cores and composite components only, expressed as by weight as a percentage of the panel assembly. No EPD on domestic hardwood plywood as industry study not completed.

2. Building Product Disclosure and Optimization: Sourcing of Raw Materials
   a. FSC® Mix [Credit] through COC Distributor, NC-COC-000065
      i. Certificate: https://www.columbiaforestproducts.com/app/uploads/2019/06/Columbia-Forest-Products-FSC-COC-w_CW-Certificate-17.12.2018.pdf
      ii. Scope: https://info.fsc.org/details.php?id=a0240000005sUorAAE&type=certificate
      iii. Support on valuation of FSC Mix in project work by FSC US
         1. https://us.fsc.org/en-us/market/green-building/faqs-for-green-building
         2. https://us.fsc.org/en-us/market/green-building/fsc-continuing-education
   b. Pre-Consumer recycled wood content consistent with ISO 14021 claims available from board core suppliers as used in PureBond NAF pMDI MDF and PB core assemblies.
      i. Inquire with Columbia staff as each case is different.
      ii. Environmentally Certified Composite Program [ECC] not sufficient as it includes recovered "forest thinnings" which do not meet ISO 14021 definition as acceptable content. Caveat Emptor. Columbia simply passes these claims through from primary board core manufacturer and presses for ISO 14021 compliant claims it can share with specification community.
   c. No support for regional adder as extracted, manufactured and purchased within 100-mile radius in LEED V4 is impossible to meet with present supply chain, sourcing methods for composite panel production.
   d. Columbia PureBond production is compliant with TSCA Title VI, CARB requirements for NAF, ULEF emissions levels not to exceed 0.05 ppm as verified by Capital Testing, TPC-8. Columbia panel production is compliant with LEED V4 Composite Wood Evaluation.
      i. Chain of Custody paperwork through distributor provides bona fides for LEED project documentation. Columbia's Certificates through Capital Testing available here: https://www.columbiaforestproducts.com/library/information/carb-regulation-information/

3. Building Product Disclosure and Optimization – Material Ingredients
   a. Domestic veneer core PureBond production is Declare® labeled which is a USGBC approved program defined as meeting the material ingredient reporting criteria.
      i. https://declare.living-future.org/products/hp-1-purebond-mpx-decorative-hardwood-plywood-unfinished
      ii. Declare label does not presently cover composites which are disclosed on a one-off basis once volume and commitment to purchase are understood clearly.
   b. Columbia does not maintain an ingredient optimization certification at this time.
   c. Columbia does not engage in a supply chain optimization program.

ONLY FSC-MIX [CREDIT] PANELS CAN BE PRODUCED. TWO-STEP PLATFORM CONSTRUCTION IS PREFERRED FOR SLICED DECORATIVE VENEERS AND WALL PANEL CONSTRUCTION TO REDUCE CORE TELEGRAPHING; SINGLE-STEP CONSTRUCTION PROVIDES A BETTER VALUE FOR CASE GOODS INTERIORS. MDF CORES ARE RECOMMENDED FOR DOORS, DRAWER FRONTS END PANELS AND ARCHITECTURAL PANELING APPLICATIONS AS MDF RESULTS IN LESS WARP, CORE TELEGRAPHING.
SELECT ONE OF THE FOLLOWING PARAGRAPHS.

A. MPX® Brand Hardwood Veneer Core Plywood:
Manufactured by Columbia Forest Products: http://www.columbiaforestproducts.com/product/mpx/

B. NAF Particleboard Core Hardwood Plywood:
Provide pMDI bonded particleboard cores with PureBond®, formaldehyde-free soy technology for lamination of face and back veneers by Columbia Forest Products:
http://www.columbiaforestproducts.com/product/particleboard/

C. NAF Medium Density Fiberboard (MDF) Core Hardwood Plywood:
Provide pMDI bonded MDF cores with PureBond®, formaldehyde-free soy technology for lamination of face and back veneers by Columbia Forest Products: http://www.columbiaforestproducts.com/product/mdf/

D. Combi-Core Hardwood Plywood: Provide panels constructed of veneer core inner plies with no-added formaldehyde pMDI-bonded MDF crossbands: panel shall offer similar strength and stability to veneer core but shall have the void- free surface quality of PBC or MDF: panel shall provide excellent substrate for thin-sliced woods and rotary woods with face and back veneers laminated with PureBond formaldehyde-free technology: Classic Core® as manufactured by Columbia Forest Products:

http://www.columbiaforestproducts.com/product/classic-core/

THE FOLLOWING SUBPARAGRAPHS, SUB-SUBPARAGRAPHS PERTAIN TO ALL FOUR TYPES OF PLYWOOD ABOVE. MAKE SELECTIONS WHERE REQUIRED.

1. Panel:
   a. [FSC MIX - veneer core MPX constructions and all other options below]
   b. Manufacture according to ANSI/HVPA HP-1.

SELECT ONE OF THE FOLLOWING FOUR CORE CONSTRUCTION SUB-SUBPARAGRAPHS. RETAIN FIRST FOR VENEER CORE HARDWOOD PLYWOOD, SECOND FOR PARTICLEBOARD CORE HARDWOOD PLYWOOD, THIRD FOR MDF CORE HARDWOOD PLYWOOD OR FOURTH FOR MULTI-LAYERED CORE HARDWOOD PLYWOOD OR COMBI·CORE HARDWOOD PLYWOOD.

1. Core construction shall be FSC-Mix [MPX ®] veneer core.
2. Core construction shall be FSC-Mix NAF pMDI bonded particleboard
3. Core construction shall be FSC-Mix NAF pMDI bonded MDF
4. Core construction shall be FSC-Mix Classic Core®, combination core construction with NAF pMDI bonded MDF crossbands.

3. Thickness: As shown on the Drawings. [5/32" through 1-1/2" available]

4. Veneers:

COLUMBIA FOREST PRODUCTS MANUFACTURES ALL DECORATIVE PLYWOOD ON A BUILD-TO-ORDER BASIS. SPECIES SELECTION WHICH FOLLOWS REFLECTS MOST COMMON SPECIES BUT OTHER UNUSUAL VENEERS MAY ALSO BE AVAILABLE BY QUOTE. IT IS RECOMMENDED THAT COLUMBIA FOREST PRODUCTS BE CONTACTED REGARDING AVAILABILITY OF SPECIES,,GRADES, CUTS AND MATCHES FOR VARIOUS SPECIES AND PANEL DIMENSIONS, PARTICULARLY FOR PROJECTS REQUIRING LESS THAN30 4'x8' SHEETS (<1000 SQUARE FEET [93 SQUARE METERS]).
https://www.columbiaforestproducts.com/library/veneer-species-guide/
https://www.columbiaforestproducts.com/app/uploads/2020/08/CFP-FSC-Species-Summary-Web-rev-8-2020.pdf

a. Face:

1) Species: [Alder, Red PS][Anigre PS][Ash PS][Aspen, Trembling RC][Basswood RC][Beech, American RC, PS][Beech, European Steamed PS][Birch RC, PS][Butternut PS][Cedar, Western Red, Clear PS][Cedar, Western Red,Knotty PS][Cedar, Aromatic Eastern PS][Black Cherry PS][Cumaru, Kumaru PS][Cypress PS][Elm, American Red PS][Elm, Grey PS][Engineered Veneer - Obeche PS][Fir, Douglas PS][Fuma RC][Gum, Red PS][Grandis, Red PS][Hemlock PS][Hickory/Pecan PS][Holly, American PS][Khaya PS][Ipe PS][Jatoba PS][Khaya PS][Maple RC, PS][Maple, Red/Silver RC][Oak, Red RC, PS][Oak, White RC, PS][Pine, Eastern Clear PS][Pine, Knotty PS][Pine, Western Clear PS][Pine, Yellow PS][Poplar, Yellow RC, PS][Sapele PS][Sycamore (American) PS][Tineo PS][Juglans nigra Walnut, Black PS]

2) Color Selection: [Natural sap and heart blend] [Sap (light color)] [Heart (dark color)]

3) Glade: [AA] [A] [B] [C] [D] per ANSI/HPVA HP-1.

4) Cut: [Rotary] [Plain-sliced] [Quarter-sliced] [Rift cut].

5) Veneer Match: [Book-matched] [Slip match] [Random match] [Pleasing match] [Plank match].

BALANCED CONSTRUCTION (SAME FACE AND BACK SPECIES) IS TYPICAL BUT DIFFERENT, COMPATIBLE SPECIES COMBINATIONS ARE POSSIBLE (E.G. CHERRY WITH A MAPLE BACK) IN SPECIAL CASES. PLEASE CONSULT WITH COLUMBIA FOREST PRODUCTS FOR A DETERMINATION OF FEASIBILITY OF OTHER SPECIES COMBINATIONS.

b. Back:

1) Species: [Alder, Red PS][Anigre PS][Ash PS][Aspen, Trembling RC][Basswood RC][Beech, American RC, PS][Beech, European Steamed PS][Birch RC, PS][Butternut PS][Cedar, Western Red, Clear PS][Cedar, Western Red,Knotty PS][Cedar, Aromatic Eastern PS][Black Cherry PS][Cumaru, Kumaru PS][Cypress PS][Elm, American Red PS][Elm, Grey PS][Engineered Veneer - Obeche PS][Fir, Douglas PS][Fuma RC][Gum, Red PS][Grandis, Red PS][Hemlock PS][Hickory/Pecan PS][Holly, American PS][Khaya PS][Ipe PS][Jatoba PS][Khaya PS][Maple RC, PS][Maple, Red/Silver RC][Oak, Red RC, PS][Oak, White RC, PS][Pine, Eastern Clear PS][Pine, Knotty PS][Pine, Western Clear PS][Pine, Yellow PS][Poplar, Yellow RC, PS][Sapele PS][Sycamore (American) PS][Tineo PS][Juglans nigra Walnut, Black PS]

2) Color Selection: [Natural sap and heart blend] [Sap (light color)] [Heart (dark color)]

3) Glade: [AA] [A] [B] [C] [D] per ANSI/HPVA HP-1.

4) Cut: [Rotary] [Plain-sliced] [Quarter-sliced] [Rift cut].

5) Veneer Match: [Book-matched] [Slip match] [Random match] [Pleasing match] [Plank match].

TWO FACTORY FINISHES BELOW ARE OPTIONAL IN DIFFERENT RATES OF APPLICATION [REGULAR OR SEFA] RETAIN EITHER, BOTH, OR NEITHER AS APPUCABLE TO THE PRO.JECT.

4. Factory Finish: Provide clear UV-cured acrylic coating on [face side] [back side] [both sides] [Scientific Equipment and Furniture Association (SEFA) Conforming option where additional finish is applied for chemical resistance – LabCoat®]

https://www.columbiaforestproducts.com/product/uv-labcoat/

a. Gloss Level: [Flat. 15 to 30 gloss units] [Satin, 31 to 45 gloss units] [Semi-gloss. 46 to 60 gloss units] [Gloss. 61 to 100 gloss units] measured on 60 degree gloss meter per ASTM D 523.

INCLUDE BELOW IF APPLICABLE TO THE PROJECT.

G. Fire-Retardant Treated Materials: Where indicated, use materials impregnated with fire retardant chemical formulations indicated by a pressure process or by other means acceptable to authorities having jurisdiction to produce products with surface burning characteristics specified.

1. Use chemical formulations that do not bleed through or otherwise affect finishes.

2. Mill lumber before treatment and implement special procedures during treatment and drying processes that shall prevent lumber from warping and developing discolorations from drying sticks or other causes, including marring, and other defects affecting appearance of treated architectural woodwork.

3. Discard treated material that does not comply with requirements of referenced woodworking standard. Do not use twisted, warped, bowed, discolored or otherwise damaged or defective material.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verification of Conditions: Examine areas and conditions under which the work is to be installed and notify the Contractor in writing, with a copy to the Owner and the Architect of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until

unsatisfactory conditions have been corrected.

1. Beginning of the work shall indicate acceptance of the areas and conditions as satisfactory by the Installer.

3.2 PREPARATION

A. Condition work to average prevailing humidity conditions in installation areas before installing. Before installing work. Examine shop-fabricated work for completion and complete work as required.

3.3 INSTALLATION

A. General: Install in accordance with reviewed product data, final shop drawings, manufacturer's written recommendations and as indicated on the drawings.

B. Quality Standard: Install architectural woodwork to comply with AWI AWS for the same grades specified in Part 2- Products of this Section for type of architectural woodwork involved. NOTE NEW ARCHITECTURAL WOODWORK STANDARD LAUNCHED BY ARCHITECTURAL WOOD INSTITUTE (SEE REFERENCE SECTION.) PERFORMANCE RATING, TESTING OF FINISHES INTRODUCED.

INCLUDE BELOW IF APPLICABLE TO THE PROJECT.

C. Installation Tolerances: Install architectural woodwork plumb, level, true and straight with no distortions. Shim as required with concealed shims.

3.4 ADJUSTING AND CLEANING

A. Repair damaged and detective work where possible to eliminate functional and visual detects. Where not possible to repair, replace the work

B. Clean architectural woodwork on exposed and semi exposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

3.5 PROTECTION

A. Provide final protection and retain conditions in a manner acceptable to the Installer that shall ensure that the work shall be without damage at time of Substantial Completion.

END OF SECTION