SECTION 061000

ROUGH CARPENTRY

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**NOTE TO SPECIFIER**

*Use this Specification Section for Mail Processing Facilities.*

***This is a Type 1 Specification with completely editable text; therefore, any portion of the text can be modified by the A/E preparing the Solicitation Package to suit the project.***

*For Design/Build projects, do not delete the Notes to Specifier in this Section so that they may be available to Design/Build entity when preparing the Construction Documents.*

*For the Design/Build entity, this specification is intended as a guide for the Architect/Engineer preparing the Construction Documents.*

*The MPF specifications may also be used for Design/Bid/Build projects. In either case, it is the responsibility of the design professional to edit the Specifications Sections as appropriate for the project.*

*Text shown in brackets must be modified as needed for project specific requirements.* *See the “Using the USPS Guide Specifications” document in Folder C for more information.*

*The last date that USPS revised this standard specification section occurs in two places, at the end of this section and in the Table of Contents. If the date in this section matches the date in the Table of Contents, then you are using the latest version. Do not delete or revise the “last revised” date at the end of the section during the development of the Project Manual.*

*The footer in this section should be edited to replace the text, “USPS MPF SPECIFICATION” with the project name, and the blank date in the center should be replaced with the submission date, for interim design reviews, or the issue date of the completed Project Manual.*

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1. GENERAL
	* + 1. SUMMARY
				1. This Section includes the following:

Wood blocking, cants, and nailers.

Plywood backing panels.

Miscellaneous deadwood.

Wood – preservative – treated materials.

Fire – retardant – treated materials.

* + - 1. DEFINITIONS
				1. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in least dimension.
				2. Lumber grading agencies, and the abbreviations used to reference them, include the following:

SPIB: The Southern Pine Inspection Bureau.

WCLIB: West Coast Lumber Inspection Bureau.

* + - 1. ACTION SUBMITTALS
				1. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.

Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.

Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.

For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D5664.

For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.

Include copies of warranties from chemical treatment manufacturers for each type of treatment.

1.4 INFORMATIONAL SUBMITTALS

A. Evaluation Reports: For the following, from ICC-ES:

 1. Preservative – Treated Wood.

 2. Fire – Retardant – Treated Wood.

1. PRODUCTS
	* + 1. WOOD PRODUCTS, GENERAL
				1. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.

Factory mark each piece of lumber with grade stamp of grading agency.

For exposed lumber indicated to receive a stained or natural finish, mark grade stamp on end or back of each piece.

Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.

Provide dressed lumber, S4S, unless otherwise indicated.

* + - 1. WOOD TREATMENT

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***NOTE TO SPECIFIER***

*Type B ACQ is primarily used for west coast species such as Douglas Fir and Western Hemlock due to ability to penetrate these denser woods. Type D ACQ is primarily used for pine species such as Southern Yellow Pine. Select the type as appropriate for the project. Verify manufacturers and product availability.*

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* + 1. Preservative Pressure Treated Lumber, Alkaline Copper Quat (ACQ): Type B, Ammoniacal Copper Quat or Type D, Amine Copper Quat.
			1. Manufacturers:
				1. Chemical Specialties, Incorporated, Charlotte, NC (800) 421-8661.
				2. Arch Wood Protection, Inc., Smyrna, GA (770) 801-6600
				3. Kippers Performance Chemicals., Griffin, GA, (770) 233-4200
			2. Products:
				1. CSI: “Preserve”.
				2. Arch Wood: “Natural Select”
				3. Koppers: “Nature Wood”
			3. Impregnate lumber with preservative treatment conforming to AWPA Standard C1 and P5. Apply the preservative in a closed cylinder by pressure process in accordance with AWPA Standard C15.
			4. Retention of preservative:
				1. Moderate service conditions (weather exposure): 0.25 pounds per cubic foot (oxide basis).
				2. Severe conditions (constant contact with ground or water): 0.40 pounds per cubic foot (oxide basis).
			5. Remove excess moisture where shrinkage is a serious fault or where treated lumber will be in contact with plaster, or stucco, and where water-borne treated lumber is to be painted or stained.
			6. Lumber shall be dried to 15 to 19 percent moisture content after treatment, and material to be painted or stained shall have knots and pitch streaks sealed as with untreated wood.
			7. Liberally brush freshly cut surfaces, bolt holes and machined areas with the same preservative in accordance with AWPA Standard M4.
			8. Treatment material shall provide protection against termites and fungal decay and shall be registered for use as a wood preservative by the U. S. Environmental Protection Agency.
		2. Fire Retardant Treatment:
			1. Manufacturers:
				1. Chemical Specialties, Incorporated, Charlotte, NC (800) 421-8661.
				2. Hickson Corporation, Smyrna, GA: (770) 801-6600.
				3. Hoover Treated Wood Products, Incorporated, Thomson, GA: (800) 832-9663.
			2. Products:
				1. CSI: “D-Blaze”.
				2. Hickson: “Dricon”.
				3. Hoover: “Pyro-Guard”.
			3. Lumber and plywood shall be treated as follows:
				1. Each piece of treated material shall bear the UL FR-S rating (flamespread and smoke developed less than 25) indicating compliance with an extended 30 minute tunnel test in accordance with ASTM E84 or UL 723.
				2. After treatment, all lumber shall be dried to an average moisture content of 19 percent or less.
				3. After treatment, all plywood, shall be dried to an average moisture content of 15 percent or less.
				4. All treated material shall meet interior Type A requirements in AWPA standard C-20 for lumber and C-27 for plywood.
				5. Chemicals used to treat material shall be free of halogens, sulfates and formaldehyde.
		3. Wood Requiring Treatment:
			1. Lumber, Preservative Treated: Nailers, blocking, stripping, and similar items in conjunction with roofing, flashing, and other construction. Sills, blocking, furring, stripping, and similar items in contact with masonry or concrete
			2. Lumber, Fire Retardant Treated: Interior framing, furring, blocking, nailers, and miscellaneous exposed wood. Do not treat furring in contact with masonry or concrete.
			3. Interior Plywood, Fire Retardant Treated: Exterior type plywood backing for electrical and telephone equipment. See Evaluations in Division 06 Section "Rough Carpentry" for information about treatment chemicals.
			4. MISCELLANEOUS LUMBER
				1. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:

Blocking.

Nailers.

* + - * 1. For items of dimension lumber size, provide Construction or No. 2 grade lumber with 19 percent maximum moisture content of any species.
				2. For concealed boards, provide lumber with 19 percent maximum moisture content and the following species and grades: Mixed southern pine, No. 2 grade; SPIB.
				3. For blocking not used for attachment of other construction Utility, Stud, or No. 3 grade lumber of any species may be used provided that it is cut and selected to eliminate defects that will interfere with its attachment and purpose.
				4. For blocking and nailers used for attachment of other construction, select and cut lumber to eliminate knots and other defects that will interfere with attachment of other work.
			1. PLYWOOD BACKING PANELS
				1. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2-inch (13-mm) nominal thickness.
			2. FASTENERS
				1. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.

Where carpentry is exposed to weather, in ground contact, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A153/A153M of Type 304 stainless steel.

* + - * 1. Nails, Brads, and Staples: ASTM F1667.
				2. Wood Screws: ASME B18.6.1.
				3. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
				4. Lag Bolts: ASME B18.2.1 (ASME B18.2.3.8M).
				5. Bolts: Steel bolts complying with ASTM A307, Grade A (ASTM F568M, Property Class 4.6); with ASTM A563 (ASTM A563M) hex nuts and, where indicated, flat washers.
				6. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E488 conducted by a qualified independent testing and inspecting agency.

Material: Carbon-steel components, zinc plated to comply with ASTM B633, Class Fe/Zn 5.

Material: Stainless steel with bolts and nuts complying with ASTM F593 and ASTM F 594, Alloy Group 1 or 2 (ASTM F738M and ASTM F836M, Grade A1 or A4).

1. EXECUTION
	* + 1. INSTALLATION, GENERAL
				1. Set carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit carpentry to other construction; scribe and cope as needed for accurate fit. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
				2. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
				3. Framing Standard: Comply with AF&PA's "Details for Conventional Wood Frame Construction," unless otherwise indicated.
				4. Do not splice structural members between supports, unless otherwise indicated.
				5. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
				6. Sort and select lumber so that natural characteristics will not interfere with installation or with fastening other materials to lumber. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
				7. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; do not countersink nail heads, unless otherwise indicated.
			2. WOOD BLOCKING, AND NAILER INSTALLATION
				1. Install where indicated and where required for screeding or attaching other work. Form to shapes indicated and cut as required for true line and level of attached work. Coordinate locations with other work involved.
				2. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated.
			3. PROTECTION
				1. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
				2. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

END OF SECTION

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