Add the following to subsection 912.01, on page 766 of the Standard Specifications for Construction, after the second paragraph.

Subsection 912.11 covers preservative treatment for sawn timber and lumber that will be used where human contact will occur, such as decks, walkways, handrails, tables, and benches.

Delete the subsection 912.03.D, Results of Treatment, on page 767 of the Standard Specifications for Construction, in its entirety and replace with the following.

D. **Results of Treatment.** Conform to associated AWPA Standards for treatment results, including preservative analysis and penetration and retention determinations.

Delete the first sentence in Subsection 912.04.B, Preservative, on page 768 of the Standard Specifications for Construction, and replace with the following.

Use a 20 percent solution of copper naphthenate, based on copper as metal, meeting the requirements of AWPA Standard M4 for field treatment.

Delete the subsection 912.06.B, Species, on page 772 of the Standard Specifications for Construction, in its entirety and replace with the following:

B. **Species.** Only use species specifically included in AWPA Standard U1, Section 5, Table UCS-U1, for UCS listing UC4C.

Delete the subsection 912.06.C, Preservative Treatment, on page 772 of the Standard Specifications for Construction, in its entirety and replace with the following:

C. **Preservative Treatment.** Condition and treat structural timber and lumber according to AWPA Standard U1, Section 6, Commodity specification A, use category 4A (UC4A) for above ground, and use category 4C (UC4C) for ground contact.

Delete the subsection 912.06.D, Preservatives, on page 772 of the Standard Specifications for Construction, in its entirety and replace with the following:

D. **Preservatives.** Use a preservative for the wood species conforming to the AWPA Standard U1 Section 4, “preservatives for pressure treatment processes,” and the applicable P standard listed therein.
Delete the subsection 912.07.A, Physical Characteristics and Species, on page 772 of the Standard Specifications for Construction, in its entirety and replace with the following:

A. **Physical Characteristics and Species.** Prior to preservative treatment, timber piles must meet the requirements of ASTM D 25, Standard Specifications for Round Timber Piles, except as modified in this subsection. Timber piles must be southern pine, red pine, jack pine, ponderosa pine, douglas fir, western larch, lodgepole pine or red oak.

Delete the subsection 912.07.H, Preservative Treatment, on page 773 of the Standard Specifications for Construction, in its entirety and replace with the following:

H. **Preservative Treatment.** Perform preservative treatment of timber piling in accordance with the American Wood Preservers Association (AWPA) Use Category Standard UC4C for Foundation and Land and Fresh Water Exposure. Submit certification by treating plant stating type, pressure process used, net amount of preservative retained, and compliance with applicable standards. Preservatives and retentions shall be in accordance with AWPA Standard U1 Table 3.0, Use Category 4 (UC4C).

Add the following as subsection 912.07.I, on page 773, of the Standard Specifications for Construction:

I. **Preservatives.** Conform to the AWPA Standard U1 Section 4, “preservatives for pressure treatment processes,” and the applicable P standard listed therein.

Delete the subsection 912.08.J, Preservative Treatment, on page 775 of the Standard Specifications for Construction, in its entirety and replace with the following:

J. **Preservative Treatment.** Condition and treat all round posts, except northern white cedar, according to AWPA Standard U1, Section 6, Commodity specification B, use category 4B (UC4B). Treat sawn posts according to 912.06.C.

Delete the subsection 912.08.L, Preservatives, on page 775 of the Standard Specifications for Construction, in its entirety and replace with the following:

L. **Preservatives.** Conform to the AWPA Standard U1 Section 4, “preservatives for pressure treatment processes,” and the applicable P standard listed therein.

Delete the subsection 912.08.M, Results of Treatment, on page 775 of the Standard Specifications for Construction, in its entirety and replace with the following:

M. **Results of Treatment.** Minimum preservative penetration and retention determined according to AWPA Standards are shown in Table 912-3.

<table>
<thead>
<tr>
<th>Preservative</th>
<th>Minimum Retention 0.0 - 0.6 in zone</th>
<th>AWPA Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil Type Preservatives</td>
<td>0.60 pcf</td>
<td>A 6</td>
</tr>
<tr>
<td>Waterborne Type Preservatives</td>
<td>0.60 pcf</td>
<td>A 11</td>
</tr>
</tbody>
</table>

Minimum Penetration
Delete the subsection 912.09.F, Preservative Treatment, on page 780 of the Standard Specifications for Construction, in its entirety and replace with the following:

F. Preservative Treatment. Treat wood for guardrail blocks according to AWPA Standard U1, Section 6, Commodity specification A, use category 4A (UC4A). Treat wood for guardrail posts and sign posts according to AWPA Standard U1, Section 6, Commodity specification A, use category 4B (UC4B).

Delete Table 912-10 in subsection 912.09.K, Retention, on page 783 of the Standard Specifications for Construction, and replace it with the following:

<table>
<thead>
<tr>
<th>Preservative</th>
<th>Minimum Retention, pcf</th>
<th>AWPA Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Guardrail Posts</td>
<td>Sign Posts</td>
</tr>
<tr>
<td>Oil Type Preservatives</td>
<td>0.60</td>
<td>0.50</td>
</tr>
<tr>
<td>Waterborne Type Preservatives</td>
<td>0.60</td>
<td>0.50</td>
</tr>
</tbody>
</table>

Delete the subsection 912.10.C, Preservative Treatment, on page 785 of the Standard Specifications for Construction, in its entirety and replace with the following:

C. Preservative Treatment. Condition and pressure treat wood used in rustic construction according to AWPA Standard U1, Section 6, Commodity specification B, use category 4A (UC4A) for above ground and use category 4B (UC4B) for ground contact.

Delete the subsection 912.10.E, Results of Treatment, on page 785 of the Standard Specifications for Construction, in its entirety and replace it with the following:

E. Results of Treatment. Determine results of treatment, including preservative analysis and penetration and retention determinations according to associated AWPA standards.

Add the following as subsection 912.11, on page 785, of the Standard Specifications for Construction:

912.11 Timber and Lumber for Human Conveyances.

A. Preservative Treatment. Sawn timber and lumber that will be used where human contact will occur shall be treated with Ammoniacal Copper Quat (ACQ), in accordance with AWPA Standard U1-04 for the appropriate wood species listed. The ACQ preservative must meet requirements in AWPA Standard P5. Do not use Chromium Copper Arsenate (CCA), or other type of arsenic based preservative.
The sawn lumber and timber must meet the minimum preservative retention and penetration requirements listed in AWPA Standard U1-04, Tables 3.0 and 4.0, for use categories UC4A (above ground) and UC4B (ground contact). Any wood species cited in Table 3.0 with NR (Not Recommended) for ACQ preservative shall not be used. The following minimum retentions shall be used:

<table>
<thead>
<tr>
<th>Wood Use Category</th>
<th>Min. Retention (pcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UC4A (above ground)</td>
<td>0.40</td>
</tr>
<tr>
<td>UC4B (ground contact)</td>
<td>0.60</td>
</tr>
</tbody>
</table>

Testing for preservative penetration and retention shall be determined by chemical assay according to AWPA Standard A11. Processing and treatment of wood must be according to AWPA Standard T1-04. The maximum preservative temperature during the entire pressure period shall not exceed 150 °F.

B. Construction. For wood treated with ACQ preservative, use stainless steel fasteners or hot dipped galvanized fasteners in accordance with ASTM A 653, batch or post-dipped process, with a minimum coating thickness of 1.85 oz of Zinc per square foot of surface area (G185). Do not mix fastener types. Aluminum must not be in direct contact with ACQ treated wood. Non metallic spacers are to be used where contact with aluminum could occur. Do not use aluminum fasteners.