

# **Amendments to the Code of Practice for Precast Concrete Construction 2016**

## **( June 2026 )**

Legends:

 New/Amended

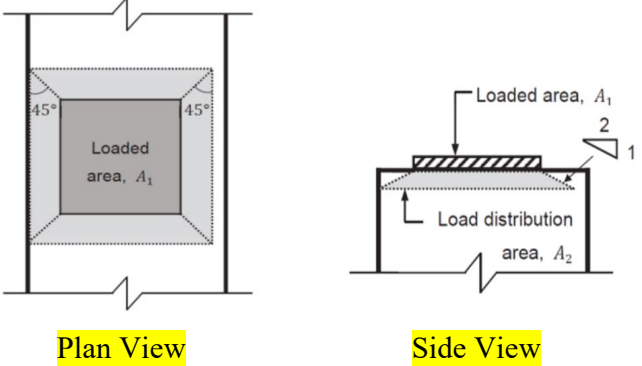
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(6/2026)

## Amendments to the Code of Practice for Precast Concrete Construction 2016

Item	Current version	2026 Amendments
1. LIST OF TABLES	<p>Table 2.7 - Values of <math>\tan \alpha_f</math> for concrete connections</p> <p>Table 2.8 - Design ultimate horizontal shear stresses at interface</p>	<p>Table 2.7 - Values of <math>\tan \alpha_f</math> for concrete connections</p> <p><b>Table 2.7a - Testing procedures with specific requirements for completed panel joints and window joints</b></p> <p>Table 2.8 - Design ultimate horizontal shear stresses at interface</p>
2. LIST OF FIGURES	<p>Figure 2.5 – Schematic arrangement of allowance for bearing</p> <p>Figure 2.6 – Back-up materials and bond breakers in movement joints</p>	<p><b>Figure 2.5a – Load distribution area and loaded area for determining the confinement modification factor</b></p> <p>Figure 2.5 – Schematic arrangement of allowance for bearing</p> <p>Figure 2.6 – Back-up materials and bond breakers in movement joints</p>
3. Clause 1.3 SYMBOLS	<p>For the purposes of this Code of Practice, the following symbols apply:</p> <p><math>G_k</math> characteristic dead load</p> <p><math>Q_k</math> characteristic imposed load</p> <p><math>f_{cu}</math> characteristic strength of concrete</p> <p><math>f_y</math> characteristic strength of reinforcement</p> <p>Other symbols are defined in the text where they occur.</p>	<p>For the purposes of this Code of Practice, the following symbols apply:</p> <p><math>G_k</math> characteristic dead load</p> <p><math>Q_k</math> characteristic imposed load</p> <p><math>f_{cu}</math> characteristic strength of concrete</p> <p><math>f_y</math> characteristic strength of reinforcement</p> <p><b><math>f_{cb}</math> design ultimate bearing strength based on the weaker of the two bearing surfaces</b></p> <p>Other symbols are defined in the text where they occur.</p>

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4. Clause 2.7.9.4	<p><b>2.7.9.4 Design ultimate bearing stress</b></p> <p>The design ultimate bearing stress is based on the weaker of the two bearing surfaces and is calculated as follows:</p> <ul style="list-style-type: none"> <li>• <math>0.4f_{cu}</math> for dry bearing on the concrete;</li> <li>• <math>0.6f_{cu}</math> for bedded bearing on concrete; or</li> <li>• <math>0.8f_{cu}</math> for contact face of a steel bearing plate cast into a member or support, with each dimension not exceeding 40% of the corresponding concrete dimension.</li> </ul> <p>An intermediate value of bearing stress between dry and bedded bearings may be used for flexible bedding.</p>	<p><b>2.7.9.4 Design ultimate bearing stress</b></p> <p>The design ultimate bearing strength based on the weaker of the two bearing surfaces, <math>f_{cb}</math> should be calculated as follows: ↓</p> <p><math>f_{cb} = 0.27mf_{cu}</math> for dry bearing on concrete</p> <p><math>f_{cb} = 0.40mf_{cu}</math> for bedded bearing on concrete</p> <p><math>f_{cb} = 0.80mf_{cu}</math> for contact face of a steel bearing plate cast into a member or support, with each dimension not exceeding 40% of the corresponding concrete dimension.</p> <p>where</p> <p><math>m</math> is the confinement modification factor taken as</p> $\sqrt{\frac{A_2}{A_1}} \leq 2,$ <p><math>A_1</math> is loaded area,</p> <p><math>A_2</math> is load distribution area (see Figure 2.5a).</p> <p>An intermediate value of bearing stress between dry and bedded bearings may be used for flexible bedding.</p>

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		 <p data-bbox="1272 644 2022 746"><b>Figure 2.5a – Load distribution area and loaded area for determining the confinement modification factor</b></p>
5. Clause 2.8.2.8	<p data-bbox="499 770 1249 802"><b>2.8.2.8 Testing</b></p> <p data-bbox="499 842 1249 1026">Precast panels often include cast in window frames, and the window assemblies are commonly subjected to tests for the infiltration of air and water. To test the potential joint performance, consideration may be given to incorporating panel to panel joints in the window test assembly.</p> <p data-bbox="499 1066 1249 1209">The most effective test, as it encompasses site workmanship, and also can encompass a large number of joints, is inspection of the completed panel joints for damp or leakage after heavy rain at site.</p> <p data-bbox="499 1249 1249 1433">In the absence of heavy rain, specific joints can be tested by spraying them with water. The hose should deliver water as a spray, not a solid jet, and the water should be directed horizontally, not upward (see clause 4.3.1 for water-tightness testing of façade panels).</p>	<p data-bbox="1272 770 2022 802"><b>2.8.2.8 Testing</b></p> <p data-bbox="1272 842 2022 1026">Precast panels often include cast in window frames, and the window assemblies are commonly subjected to tests for <b>dampness or leakage</b>. To test the potential joint performance, consideration may be given to incorporating panel to panel joints in the window test assembly.</p> <p data-bbox="1272 1066 2022 1321"><b>↓ On-site field test of the completed joints between precast panels and in-situ elements, completed panels and installed windows for dampness or leakage is considered the most realistic and effective performance test to ensure the water-tightness of the completed panel joints and window joints, and such test is widely adopted in the construction industry.</b></p> <p data-bbox="1272 1361 2022 1433"><b>The testing procedures should follow AAMA 501.2 as per Table 2.7a.</b></p>

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		<p data-bbox="1279 236 2022 347"><b>Table 2.7a – Testing procedures with specific requirements for completed panel joints and window joints</b></p> <table border="1" data-bbox="1279 352 2022 1034"> <thead> <tr> <th data-bbox="1290 357 1518 392">Item</th> <th data-bbox="1523 357 2022 392">Requirements</th> </tr> </thead> <tbody> <tr> <td data-bbox="1290 395 1518 430">Testing samples</td> <td data-bbox="1523 395 2022 430">100%</td> </tr> <tr> <td data-bbox="1290 434 1518 504">Pressure at the nozzle</td> <td data-bbox="1523 434 2022 504">205 to 240kPa</td> </tr> <tr> <td data-bbox="1290 507 1518 542">Hose diameter</td> <td data-bbox="1523 507 2022 542">19mm</td> </tr> <tr> <td data-bbox="1290 545 1518 651">Duration</td> <td data-bbox="1523 545 2022 651">5 mins in every 1.5m joint length by slowly moving nozzle over the test section</td> </tr> <tr> <td data-bbox="1290 654 1518 759">Distance of nozzle from test section</td> <td data-bbox="1523 654 2022 759">305mm +/- 25mm</td> </tr> <tr> <td data-bbox="1290 762 1518 912">Failure criterion</td> <td data-bbox="1523 762 2022 912">Dampness or leakage appears on interior surfaces during the test or within two hours after completion of the test</td> </tr> <tr> <td data-bbox="1290 916 1518 1021">Failed to meet the requirements</td> <td data-bbox="1523 916 2022 1021">Remedy all such failed joints and retest all remedied joints until all joints meet the specified criteria.</td> </tr> </tbody> </table>	Item	Requirements	Testing samples	100%	Pressure at the nozzle	205 to 240kPa	Hose diameter	19mm	Duration	5 mins in every 1.5m joint length by slowly moving nozzle over the test section	Distance of nozzle from test section	305mm +/- 25mm	Failure criterion	Dampness or leakage appears on interior surfaces during the test or within two hours after completion of the test	Failed to meet the requirements	Remedy all such failed joints and retest all remedied joints until all joints meet the specified criteria.
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6. Annex A REFERENCES		<p data-bbox="1279 1046 2022 1082"><b>A1 REFERENCED STANDARDS</b></p> <table border="1" data-bbox="1279 1086 2022 1407"> <tbody> <tr> <td data-bbox="1290 1091 1518 1257">AAMA 501.1</td> <td data-bbox="1523 1091 2022 1257">Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure</td> </tr> <tr> <td data-bbox="1290 1260 1518 1407">AAMA 501.2</td> <td data-bbox="1523 1260 2022 1407">Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls and Sloped Glazing Systems</td> </tr> </tbody> </table>	AAMA 501.1	Standard Test Method for Water Penetration of Windows, Curtain Walls and Doors Using Dynamic Pressure	AAMA 501.2	Quality Assurance and Diagnostic Water Leakage Field Check of Installed Storefronts, Curtain Walls and Sloped Glazing Systems												
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Item	Current version	2026 Amendments	
		AAMA 501.3	Field Check of Water and Air Leakage Through Installed Exterior Windows, Curtain Walls, and Doors by Uniform Air Pressure Difference
		ASTM C719-14	Standard Test Method for Adhesion and Cohesion of Elastomeric Joint Sealants Under Cyclic Movement (Hockman Cycle)
		ASTM C794-15	Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants
		ASTM C920-14a	Standard Specification for Elastomeric Joint Sealants
		ASTM C1087-00 (2006)	Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems
		ASTM E283-04(2012)	Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
		ASTM E330-14	Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference

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		ASTM E331-00(2016)	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
		ASTM E547-00(2016)	Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference
		ANSI Z97.1-2009	Glazing Materials Used in Buildings – Safety Performance Specifications and Methods of Test
		BS 6213:2000+ A1:2010	Selection of Construction Sealants – Guide