



DEPARTMENT OF PUBLIC WORKS
Building Inspection Division

April 16, 2001

MEMORANDUM

BULLETIN G09-01

To: All Contractors

From: Thomas H. Goldsbury, P.E., C.B.O.
Chief, Building Inspection Division

Subject: **Minimum Shear Wall Framing Requirements**

In the course of inspecting shear wall construction during the framing inspection stage, the inspectors are finding a pattern developing of a lack of panel edge bearing, and nailing discrepancies due to the construction techniques of the building contractors.

When standard 48x96 inch wood structural panels are used in shear wall construction, all panel edges shall be backed with a nominal 2-inch or wider framing member and the panel edge-nailing pattern shall be a minimum of 3/8 of inch from the edges and ends of boards and panels.

Structural panels (T1-11, Hardie panel, OSB, etc.) come in standard widths and lengths. The framing members (2x4, 2x6, etc.) also come in precut lengths for repetitive use in wall framing. If the structural panels and the precut framing members are used with the appropriate joint protection at the sill plate, commonly used is a shiplap joint of 3/8 to 1 inch, then the panel will not allow adequate backing at the top plate.

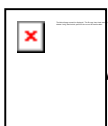
The contractor will have to add blocking at the top edge of the panel to comply with the minimum requirements for an eight-foot high wall, or use specially sized structural panels.

The following code sections cover the minimum requirements for framing vertical wood structural panels. I would like to draw your attention to the following minimum building code requirements:

Framing Members

Section B2310.2.2

All boundary members shall be proportioned and spliced where necessary to transmit direct stresses. Framing members shall be at least 2-inch nominal in width.



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In general, panel edges shall bear on the framing members and butt along their center lines. Nails shall be placed not less than 3/8 inch (9.5 mm) from the panel edge, not more than 12 inches (305 mm) apart along intermediate supports, and 6 inches (152 mm) along panel edge-bearings, and shall be firmly driven into the framing members. No unblocked panel less than 12 inches (305 mm) wide shall be used.

Panel Edge Bearing in Shear Wall Construction

Section B2310.4.1

Nail size and spacing at the edge of each panel shall be provided as shown in Table B2310.2B and by the provisions of B2312. For 3/8-inch (9.5 mm) and 7/16-inch (0.438 mm) panels, installed on studs spaced 24 inches (610 mm) on center, nails shall be spaced at 6 inches (152 mm) on center along intermediate framing members. For all other thicknesses and spacing of studs, intermediate framing members shall have nails of the same size spaced at 12 inches (305 mm) on center. All panel edges shall be backed with 2-inch (51 mm) or wider framing members.

Joints

Section B1403.6.4 exception

Wood structural panels shall be of the exterior type and shall have a thickness of 3/8 inch (9.5 mm), except as provided in Table B2308.1D. All wood structural panel joints shall be backed solidly with nailing pieces not less than 2 inches (51 mm) wide, unless wood, wood structural panel or particleboard sheathing is used, or otherwise made waterproof as required in B2303.3.

Exception: The framework is not required to be protected in accordance with B2303.3 when the joints are protected by a continuous wood batt, caulking, flashing or vertical or horizontal shiplap.

If an engineering solution is used it must be specific to that project and the detail must be signed and sealed by the engineer or record.

If you have any further questions please feel free to contact me at 630-1100.

THG/gs

cc: James R. Schock, P.E.
Supervisors
Construction Trade Inspectors