

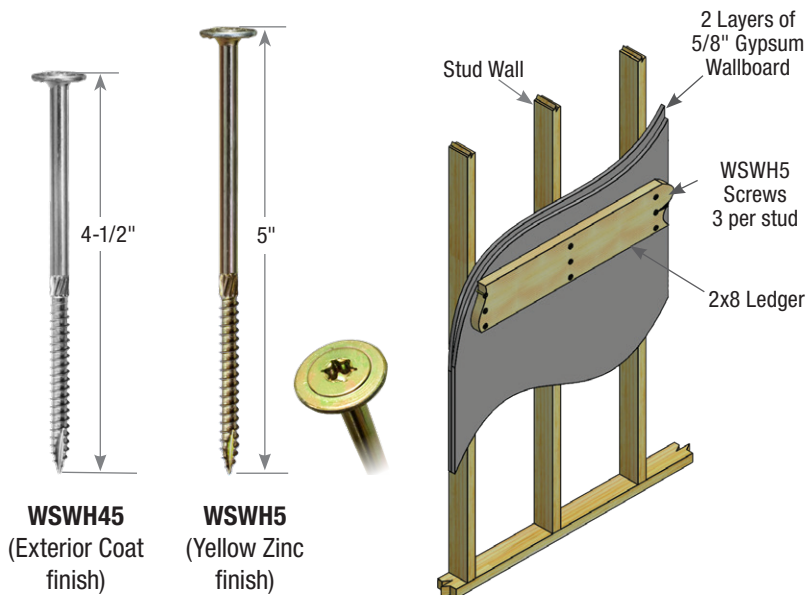


Attaching Ledger-to-Studs with One or Two Layers of 5/8" Gypsum Wallboard

MiTek's WSWH Washer Head Structural Wood Screw can be used to attach a ledger to studs directly, through 1/2" APA rated sheathing or through one or two layers of 5/8" gypsum wallboard (drywall). Screws are to be installed into the wide face of the single 2x ledger, through the gypsum board and into the center of the narrow face of the 2x stud.

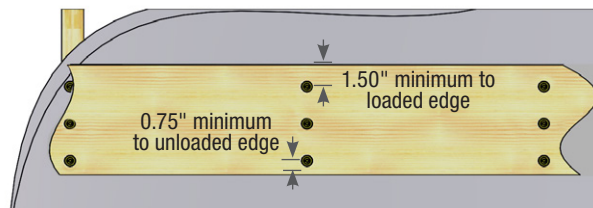
Installation:

- Ledger design to be performed by a certified design professional.
- Locate studs in wall where ledger is to be installed.
- Install WSWH5 screws through ledger and 5/8" gypsum wallboard into wall framing using a T30* drive.
- Follow the minimum edge distance guidelines in images shown below.
- Wall design must be performed by certified design professional.
- Care should be taken to install the ledger only where studs are plumb and free of any defects.
- WSWH45 should be used when no gypsum wallboard is present.

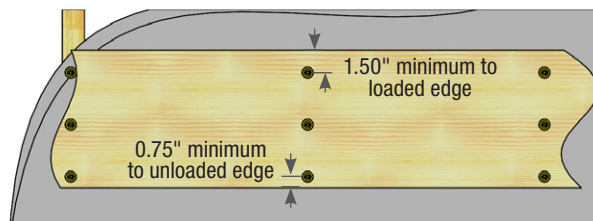


Typical 2x8 Ledger attached through 2 layers of 5/8" Gypsum Wallboard installation

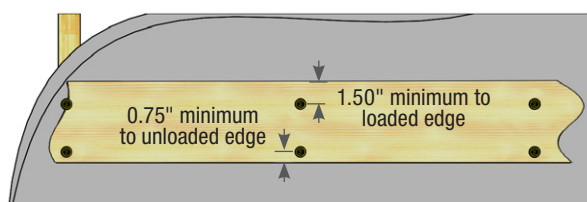
MiTek Stock No.		Ledger Size	Number of Screws per Stud ^{4,8}	Allowable Shear Per Stud (Lbs.) ^{2,5,6,7}	
Zinc Finish ¹	EXT Finish ¹			DF/SP SG ≥ 0.50	S-P-F/HF 0.42 ≤ SG < 0.50
WSWH45 WSWH5	WSWH45-EXT WSWH5-EXT	2x6	2	520	455
		2x8 or 2x10	3	860	750
		2x12	4	1040	900



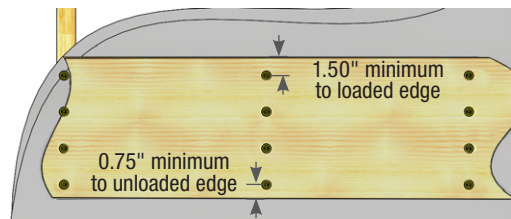
2x8 Detail



2x10 Detail



2x6 Detail



2x12 Detail

- 1) Zinc = Yellow Zinc Dichromate; EXT = Exterior Coat.
- 2) Allowable Loads are based on DF or equivalent wood members with a specific gravity ≥ 0.50, or SPF/HF members with specific gravity in the following range: 0.42 ≤ SG < 0.50.
- 3) Gypsum board must be attached per building code requirements.
- 4) Screws must be installed in the center of the 2x stud, with a tolerance of 3/16" to either side. Minimum loaded end distance for the stud is 3" and 6" when loaded away from the end. Ledger end distance must be 6" or greater for full values. For ledger end distances between 2" and 6" use 50% of the load table, for end distance between 2" and 4" predrill with a 5/32" bit.
- 5) The values above can be used when designing a ledger connection with (1) or (2) layers of 5/8" gypsum board, a direct connection with no gypsum between the ledger and studs, or a ledger connection with a single layer of APA rated 1/2" OSB.
- 6) Allowable loads are shown above at a load duration factor of C_D = 1.00. Loads may be increased where applicable to the current NDS. When in-service moisture content is greater than 19%, use C_M = 0.70.
- 7) For LRFD values, the values above should be adjusted in accordance with the 2018 NDS, Section 11.3.
- 8) Main members (stud) shall be loaded parallel to grain with a minimum penetration of 2-1/4" while side members (ledger) shall be loaded perpendicular to grain with a minimum penetration of 1-1/2".

* T30 is a trademark of Acument

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