BOARD OF
BUILDING AND SAFETY
COMMISSIONERS

MARSHA L. BROWN
PRESIDENT

PEDRO BIRBA
VICE-PRESIDENT

VAN AMBATIELOS
HELENA JUBANY
ELENORE A. WILLIAMS

CITY OF LOS ANGELES

CALIFORNIA

ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

ANDREW A. ADELMAN, P.E.
GENERAL MANAGER

RAYMOND CHAN
EXECUTIVE OFFICER

International Staple, Nail and Tool Association
512 West Burlington Avenue, Suite 203
La Grange, IL 60525-2245

Attn: John W. Kurtz
(708) 482-8138

RESEARCH REPORT: RR 23633
(CSI # 06090)

Expires: July 1, 2009

GENERAL APPROVAL - Renewal/Clerical Modification - International Staple, Nail and Tool Association pneumatic or mechanically driven nails and staples.

DETAILS

International Staple, Nail and Tool Association nails and staples are manufactured under the Trade Names of Air Nail, BlueLinx, California Nail & Supply, Carpenters' Choice, DeWalt, Dubai Wire, Duo-Fast, Empire Products, Falcon, Fasco, Fasco/Beck, Fas'ners Unlimited, Gerdau Ameristeel Atlas Steel and Wire Location, Global Product Supply, Golden State, Grip-Rite, Halsteel, Hitachi, ISM, Makita, Master Fasteners, Max USA, Milwaukee, NailPro, Paslode, Porter-Cable, Powers, Prebena, PrimeAir, PrimeGuard Plus, Senco, Specialty Fasteners, Stanley-Bostitch, SureFit and Tree Island. The nails and staples are approved for use in diaphragm and shear wall construction and as permitted in the tables herein.

The approval is subject to the following requirements:

1. Approved products shall be contained in a box labeled with any of the above trade names.

2. Where fasteners other than those specified in the Code for diaphragm or shear wall construction or other structural uses are proposed, the fasteners shall be specified on the plans by the design engineer of the building.

3. Staples may not be used in lieu of nails where gypsum wallboard is to be fastened in a fire-rated system.

LADBS G-5 (Rev. 7/05)

AN EQUAL EMPLOYMENT OPPORTUNITY - AFFIRMATIVE ACTION EMPLOYER

DISCUSSION

Clerical modification is to add the company, California Nail & Supply Co., Inc., to remove trade names Stanley Allspecs and Stan Tech, and to remove one surfit trade name that had been listed twice.

Tests by approved testing agencies justify the use of these fasteners. In addition, the lateral load carrying capacity of fasteners is determined by the criteria set forth in Handbook 72 of the U.S. Department of Agriculture for wire nails and and the National Design Specifications for stress grade lumber and its fastenings.

This general approval of an equivalent alternate to the Code is only valid whre an engineer and/or inspector of this Department has determined that all conditions of this approval have been met in the project in which it is to be used.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

YEUAN CHOU, Chief
Engineering Research Section
2319 Dorris Place
Los Angeles, CA 90031
Phone (213) 485-2376
Fax (213) 847-0985

RB:md
RR23633/wp8.0
R11-06-2007
5C2/0104.2.6/2325.1

TABLE I
Allowable Loads for Nails and Staples

Fastener	Diameter (in.)	Gage	Penetration req'd into main member for lateral strength (in.)	Allowable Loads (pounds)	
				Lateral Gr. II	Withdrawal per inch of penetration
6d cooler	.0915	13	1	46	23
6d box	.099	12-1/2	1-1/8	52	25
T-nail	.097		1-1/8	52	25
staple	.0625	16	1	52	32
6d casing	.099	12-1/2	1-1/8	52	--
finish T-nail	.097		1-1/8	52	--
6d common	.113	11-1/2	1-1/4	63	29
8d cooler	.113		1-1/4	63	29
8d box	.113		1-1/4	63	29
T-nail	.113		1-1/4	63	29
6d ring shank	.120	11	1-1/4	63	29
6d screw shank	.120		1-1/4	63	29
8d casing	.113	11-1/2	1-1/4	63	--
finish T-nail	.113		1-1/4	63	--
staple	.072	15	1	64	37
10d cooler	.1205	11	1-3/8	69	31
staple	.072	15	1	64	37
10d box	.128	10-1/2	1-1/2	76	33
12d box	.128		1-1/2	76	33
10d casing	.128		1-1/2	76	--
finish T-nail	.128		1-1/2	76	--
8d common	.131	10-1/4	1-1/2	78	34
T-nail	.131		1-1/2	78	34

TABLE I (continued)
Allowable Loads for Nails and Staples

Fastener	Diameter (in.)	Gage	Penetration req'd into main member for lateral strength (in.)	Allowable Loads (pounds)	
				Lateral Gr. II	Withdrawal per inch of penetration
8d ring shank	.120	11	1-1/2	78	34
8d screew shank	.120		1-1/2	78	34
16d box	.1350	10	1-1/2	81	35
staple	.0915	13	1	92	49
10d common	.148	9	1-5/8	94	38
T-nail	.148	9	1-5/8	94	38
10d ring shank	.135	10	1-5/8	94	38
10d screw shank	.135	10	1-5/8	94	38
12d common	.148	9	1-5/8	94	38
16d sinker	.148	9	1-5/8	94	38
12d ring shank	.135	10	1-5/8	94	38
12 screw shank	.135	10	1-5/8	94	38
staple	.1055	12	1-1/8	113	54
16d common	.162	8	1-3/4	107	42
16d ring shank	.148	9	1-3/4	107	42
16d screw shank	.148	9	1-3/4	107	42
20d common	.192	6	2-1/8	139	49
30d sinker	.192	6	2-1/8	139	49
20d ring shank	.177	7	2-1/8	139	49
20d screw shank	.177	7	2-1/8	139	49

Notes:

1. The lateral loads are applicable to Douglas Fir-Larch or Southern Pine (Group II Species). The withdrawal values are applicable to Douglas Fir-Larch. For other species, adjustment is required per National Design Specification.
2. Withdrawal loads are applicable when fasteners are inserted perpendicular to grain. The values may be increased up to twice tabulated values by increasing penetration.
3. Staples shall not be utilized for butt furring.
4. Nails, other than those specified in the Code, may be used if the lateral load resistance and the withdrawal resistance are greater than those of the nail substituted. In some instances the poke-thru resistance of the material fastened, penetration and corrosion resistance of the nails are also pertinent.
5. Fasteners shall be galvanized when required by the Code.

TABLE 2
Staples for Laths, Wall and Ceiling Materials

Leg. Length O.D. (in.)	Material Fastened	Maximum Fastener Spacing (in.)
1	3/8" Gypsum Lath	5
1-1/8	1/2" Gypsum Lath	5
1	3/8" Gypsum Lath Panels, Wallboard & Backer Board	7
1-1/4	1/2" Gypsum Lath Panels, Wallboard & Backer Board	7
1-3/8	5/8" Gypsum Wallboard & Backboard	7
7/8	Exterior self-furred stucco mesh	6
7/8	Expanded metal lath	6
7/8	Welded or woven wire netting	6
7/8	Welded wire fabric	6
1-1/4	3/8" High rib metal lath	at ribs
1-3/4	3/4" High rib metal lath	at ribs

Notes:

1. Staples shall be of No. 16 gage galvanized wire with a minimum O.D. crown width of:
   3/4" for attaching gypsum materials 7/16" for attaching metal or wire lath.
2. Welded or woven wire netting shall be prehung by conventional temporary nailing prior to staple installation.
3. Where required, butt furring cannot be obtained by use of staples, their use is not allowed.
4. All staples for exterior plastering shall penetrate vertical supports a minimum of 3/4", horizontal supports of minimum of 1 1/4", which lengths shall be increased 3/8" for Group III and IV species of wood.
5. The fasteners indicated above are not applicable to fire-rated gypsum board systems.

TABLE 3

Staples for attaching Roof and Wall Covering
(No. 16 gage galvanized staples)

Material	Minimum O.D. Crown Width (in.)	No. of Staples
Asphalt-composition shingles 36" section	3/4	4
	7/16	6
Wood shingles	7/16	2
Wood shakes	7/16	2
Tin Capping Roof felts 12" apart	7/16	1

Notes:

1. Staples shall be long enough to penetrate the sheathing or 3/4".
2. Staples for asphalt composition shingles shall be driven so that the staple crown bears tightly against the shingle but does not cut into it. The crown shall be installed parallel to the long dimension of the shingle course.
3. Wood shingles and shakes shall be driven so that the staple crown is parallel to butt edge of the shingle.