MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 372-6339
www.miamidade.gov/buildingcode

NOTICE OF ACCEPTANCE (NOA)

Weyerhaeuser
P.O. Box 8449
Boise, ID 83707

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: TimberStrand Laminated Strand Lumber (LSL)

APPROVAL DOCUMENT: Drawing File Name **Miami Dade LSL 1**, titled "TimberStrand Laminated Strand Lumber (LSL)", sheets 1 and 3 of 3, dated 12/18/08, prepared by Weyerhaeuser, signed and sealed by Adam B. Pittman, P.E., bearing the Miami-Dade County Product Control Renewal stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: None

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA **renews NOA # 07-0306.01** and consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**

MIAMI-DADE COUNTY APPROVED

1/29/09

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. Drawing File Name Miami Dade LSL 1, titled "TimberStrand Laminated Strand Lumber (LSL)", sheets 1 and 3 of 3, dated 12/18/08, prepared by Weyerhaeuser, signed and sealed by Adam B. Pittman, P.E.

B. TESTS

1. Test Report on flexural strength, compression perpendicular to grain, compression parallel to grain, shear strength parallel to grain, nail withdrawal and lateral nail resistance per ASTM D5456-05 and Checklist #0475, "Durability of Wood-Base Structural Composite Lumber and Panels on "**LSL**, PSL & LVL Structural Composite Lumber", prepared by PFS Corporation, Test Report # **06-39**, dated 06/09/08, signed and sealed by James A. Rothman, P.E.

C. CALCULATIONS

1. None.

D. QUALITY ASSURANCE

1. Miami Dade Building Code Compliance Office (BCCO).

E. MATERIAL CERTIFICATIONS

1. ICC Evaluation Service Report No. 1387.

F. STATEMENTS

1. Third Party Quality Control Certification, issued by PFS/TECO on 01/16/97, signed and sealed y J. R. Nelson, P.E.
   "Submitted under NOA # 06-0119.09"

2. No change letter issued by Weyerhaeuser, dated 08/06/08, signed by Daniel W. Cheney.

G. OTHER

1. Notice of Acceptance No. **07-0306.01**, issued to Weyerhaeuser, approved on 04/12/07 and expiring on 04/09/08.

1/29/09

Carlos M. Utrera, P.E.
Product Control Examiner
NOA No. 08-0814.07
Expiration Date: April 9, 2011
Approval Date: January 18, 2009

Material Description

1. TimberStrand® Laminated Strand Lumber (LSL) is manufactured by laminating strands of aspen, yellow poplar, or a mixture of white birch, red maple and aspen. The strands are oriented in a parallel direction and formed into large mats.
2. TimberStrand® LSL is available in thicknesses up to 5½", depths up to 48" inches, and lengths up to 48 feet.
3. The strands are glued with an isocyanate-based adhesive which complies with the TimberStrand® LSL manufacturing standard. Quality control testing and inspection are provided by PFS Corporation.
4. Lateral resistance values for nails are as provided in the National Design Specifications for Wood Construction (NDS) for Douglas fir-Larch (minimum specific gravity SG=0.50). Nail withdrawal capacity is determined on the basis of the specific gravity for SPF (minimum specific gravity SG=0.42).
5. Design values for bolts loaded parallel-to-grain are as provided in the NDS for Douglas fir-Larch (minimum specific gravity SG=0.50). Design values for bolts loaded perpendicular-to-grain are as provided in the NDS for Red Maple (minimum specific gravity SG=0.58).
6. Specific approval shall be required for nail and bolt connections not herein prescribed.
7. Testing was conducted at PFS Corporation to evaluate the moisture durability of TimberStrand® LSL. This testing was done in accordance with the Metro Dade County Durability Evaluation Standard for Structural Composite Lumber Products.

General Notes:

1. Where members qualify as repetitive members as defined in the applicable code, an additional increase in allowable bending stress of 4 percent is permitted. This increase does not apply to field assembled, multi-membered beams.
2. Bearing length should never be less than 1½ inches at ends, 3½ inches at intermediate supports.
3. Spacing for nails installed on narrow face of member:

Nail Size	Closest On-Center-Spacing Per Row (1¼" Thickness) (inches)	Closest On-Center-Spacing Per Row (3½" Thickness) (inches)
8d (0.131" x 2.5") or 10d (0.128" x 3")	4	3
10d (0.148" x 3") or 12d (0.148" x 3.25")	4	3
16d (0.162" x 3.5")	6	3½

Timberstrand® LSL Allowable Design Stresses (psi) [1,2]					
Grade	Flexural Stress F_b [3]	Compression Parallel-to-Grain $F_{c\|\|}$	Compression Perpendicular-to-Grain $F_{c\perp}$ [4]	Horizontal Shear F_v	Modulus of Elasticity MOE [6]
1.3E	1,700	1,400	680	400	1.3×10^6
1.55E	2,325	2,050	800	310 [5]	1.55×10^6

1. Load parallel to wide face of strands.
2. Allowable stresses are based on covered, dry conditions of use in which a maximum moisture content of 16% will not be exceeded. TimberStrand® LSL is produced at a moisture content between 9% and 13%. Allowable design stresses have been established assuming an equilibrium moisture content (EMC) of 12%.
3. For 12 inch depth; for other depths, multiply by $(12/d)^{0.092}$, as shown below. For depths less than 3.5 inches and for plank wise (flat) bending, use the factor for 3.5 inch depth.

Depth (inches)	3.5	5.5	7.25	9.25	12.0	16.0	20.0	24.0
Multiplier	1.12	1.07	1.05	1.02	1.00	0.97	0.95	0.94

4. Compression perpendicular-to-grain ($F_{c\perp}$) may not be increased for duration of load.
5. Shear value accounts for large hole capabilities. See Allowable Holes on page 3.
6. For uniformly loaded simple span beams, the deflection is calculated as follows:

$$\Delta = \frac{270WL^4}{Ebd^3} + \frac{28.8WL^2}{Ebd}$$

Δ = Deflection, inches
W = Uniform load, plf
L = Span, feet
b = Beam width, inches
d = Beam depth, inches
E = Modulus of Elasticity, psi

PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No 08-0814.07
Expiration Date 04/09/2011
By
Miami-Dade Product Control Division

Adam B. Pitt
12/29/08

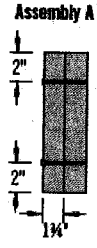
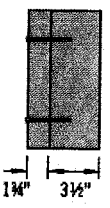
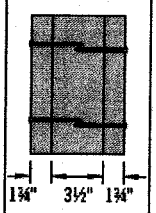
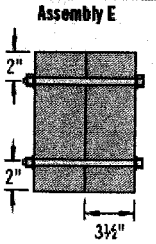
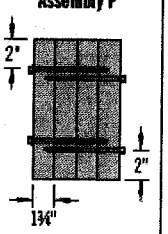
DRAWN BY:	DMN
DRAWN DATE:	12/18/2008
FILE NAME:	MIAMI DADE LSL 1

Weyerhaeuser
2910 East Amity Road
Boise, Idaho 83716

Product: TimberStrand®
Laminated Strand Lumber (LSL)
General Design Information & Properties

SCALE	SHEET NO.	OF	REV.
N.T.S.	1	3	-

Uniform Load—Maximum Uniform Load Applied to Either Outside Member (PLF)

Connector Type	Number of Rows	Connector On-Center Spacing	Connector Pattern					
			Assembly A 	Assembly B 	Assembly C 	Assembly D 	Assembly E 	Assembly F 
			3½" 2-ply	5¼" 3-ply	5¼" 2-ply	7" 3-ply	7" 2-ply	7" 4-ply
10d (0.128" x 3") Nail[1]	2	12"	370	***280***	280	***245***		
	3	12"	555	***415***	415	***370***		
½" A307 Through Bolts[2][3]	2	24"	505	380	520	465	860	340
		19.2"	635	475	655	580	1,075	425
		16"	760	570	785	695	1,290	505
SDS ¼" x 3½"[1]	2	24"	680	***510***	510	***455***		
		19.2"	850	***640***	640	***565***		
		16"	1,020	***765***	765	***680***		
SDS ¼" x 6"[3][4]	2	24"				***455***	***465***	***455***
		19.2"				***565***	***580***	***565***
		16"				***680***	***695***	***680***
USP WS35 [2]	2	24"	480	***360***	360	***320***		
		19.2"	600	***450***	450	***400***		
		16"	715	***540***	540	***480***		
USP WS6 [2][4]	2	24"				***350***	***525***	***350***
		19.2"				***440***	***660***	***440***
		16"				***525***	***790***	***525***
3⅛" TrussLok[3]	2	24"	635	***475***	475	***425***		
		19.2"	795	***595***	595	***530***		
		16"	955	***715***	715	***635***		
5" TrussLok[3]	2	24"		500	500	***445***	***480***	***445***
		19.2"		625	625	***555***	***600***	***555***
		16"		750	750	***665***	***725***	***665***
6¼" TrussLok[3]	2	24"				445	620	445
		19.2"				555	770	555
		16"				665	925	665

(1) Nailed connection values may be doubled for 6" on-center or tripled for 4" on-center nail spacing.
(2) Washers required. Bolt holes to be 9/16" maximum.
(3) 24" on-center bolted and screwed connection values may be doubled for 12" on-center spacing.
(4) 6" SDS or WS screws can be used with Parallam® PSL and Microllam® LVL, but are not recommended for TimberStrand® LSL.

General Notes

- Connections are based on NDS® 2005 or manufacturer's code report.
- Use specific gravity of 0.5 when designing lateral connections.
- Values listed are for 100% stress level. Increase 15% for snow-loaded roof conditions or 25% for non-snow roof conditions, where code allows.
- ***Bold Italic*** cells indicate **Connector Pattern** must be installed on both sides. Stagger fasteners on opposite side of beam by ½ the required **Connector Spacing**.
- 7" wide beams should be side-loaded only when loads are applied to both sides of the members (to minimize rotation).
- Minimum end distance for bolts and screws is 6".
- Beams wider than 7" require special consideration by the design professional.

PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No 08-0814.07
Expiration Date 04/09/2011
By _____
Miami Dade Product Control Division

Ada B. Pim
12/29/08

DRAWN BY:	DMN
DRAWN DATE:	12/18/2008
FILE NAME:	MIAMI DADE LSL 2

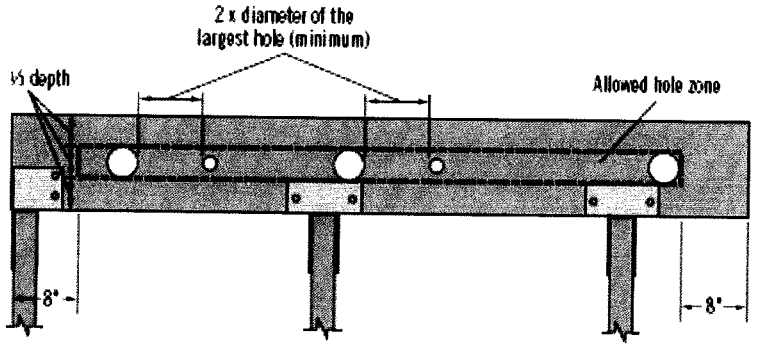
Weyerhaeuser
2910 East Amity Road
Boise, Idaho 83716

Product: TimberStrand®
Laminated Strand Lumber (LSL)
General Design Information & Properties

SCALE	SHEET NO.	OF	REV.
N.T.S.	2	3	-

ALLOWABLE HOLES

1.55E TimberStrand® LSL Headers and Beams



General Notes

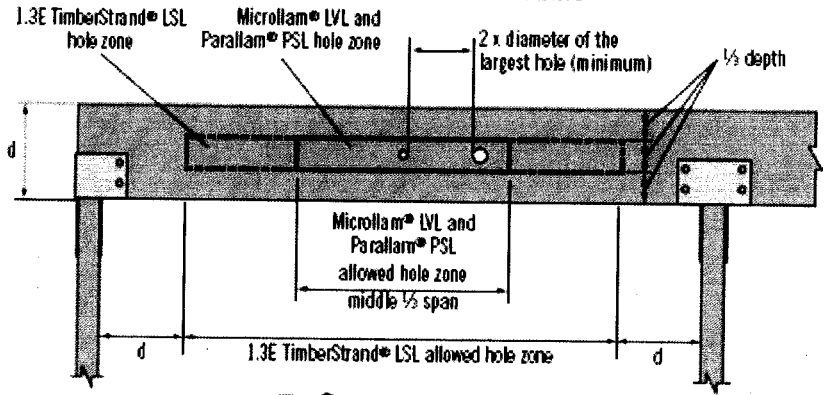
- Allowed hole zone suitable for headers and beams with uniform and/or concentrated loads.
- Round holes only.
- No holes in headers or beams in plank orientation.

1.55E TimberStrand® LSL

Header or Beam Depth	Maximum Round Hole Size
9¼"–9½"	3"
11¼"–11⅞"	3⅝"
14"–16"	4¾"

• See illustration for allowed hole zone.

Other iLevel® Trus Joist® Headers and Beams



DO NOT cut, notch, or drill holes in headers or beams except as indicated in the illustrations and tables

General Notes

- Allowed hole zone suitable for headers and beams with uniform loads only.
- Round holes only.
- No holes in cantilevers.
- No holes in headers or beams in plank orientation.

Other iLevel® Beams

Header or Beam Depth	Maximum Round Hole Size
4⅛"	1"
5½"	1¾"
7¼"–20"	2"

• See illustration for allowed hole zone.

PRODUCT RENEWED
as complying with the Florida Building Code
Acceptance No 08-0814.07
Expiration Date 04/09/2011
By _____
Miami Dade Product Control Division

Ada B. Pitt
12/29/08

DRAWN BY:	DMN
DRAWN DATE:	12/18/2008
FILE NAME:	MIAMI DADE LSL 3

Weyerhaeuser
2910 East Amity Road
Boise, Idaho 83716

Product: TimberStrand®
Laminated Strand Lumber (LSL)
General Design Information & Properties

SCALE	SHEET NO.	OF	REV.
N.T.S.	3	3	-