DrJ™ CERTIFICATION

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Technical Evaluation Report

TER 1203-02

MLT Ultralam™ Laminated Veneer Lumber (LVL)

Modern Lumber Technology Ltd. (MLT LTD.)

Product:

MLT Ultralam™ Laminated Veneer Lumber (LVL) Ultralam™ LVL – 2.0 E

Issue Date:

May 14, 2012

Revision Date:

April 19, 2022

Subject to Renewal:

April 19, 2022

LEGACY

COMPANY INFORMATION:

Modern Lumber Technology Ltd. (MLT LTD.)

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ultralam.com/uk

DIVISION: 06 00 00 - WOOD, PLASTICS AND COMPOSITES

SECTION: 06 17 00 - Shop-Fabricated Structural Wood

SECTION: 06 17 13 - Laminated Veneer Lumber

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1 PRODUCT EVALUATED[1]

1.1 MLT Ultralam™ Laminated Veneer Lumber (LVL)
Ultralam™ LVL – 2.0 E

2 APPLICABLE CODES AND STANDARDS[2,3]

2.1 *Codes*

2.1.1 *IBC—15, 18, 21: International Building Code®*

2.1.2 *IRC—15, 18, 21: International Residential Code®*

2.1.3 *NBC—10, 15: National Building Code of Canada*

2.2 *Standards and Referenced Documents*

2.2.1 *ANSI/AWC NDS: National Design Specification (NDS) for Wood Construction*

2.2.2 *ASTM D2559: Specification for Adhesives for Bonded Structural Wood Products for Use Under Exterior Exposure Conditions*

2.2.3 *ASTM D5055: Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists*

2.2.4 *ASTM D5456: Standard Specification for Evaluation of Structural Composite Lumber Products*

2.2.5 *ASTM D7247: Standard Test Method for Evaluating the Shear Strength of Adhesive Bonds in Laminated Wood Products at Elevated Temperatures*

2.2.6 *CAN/CSA O86: Engineering Design in Wood*

[1] For more information, visit drjcertification.org or call us at 608-310-6748.

[2] Unless otherwise noted, all references in this TER are from the 2021 version of the codes and the standards referenced therein. This material, design, or method of construction also complies with the 2000-2018 versions of the referenced codes and the standards referenced therein.

[3] All terms defined in the applicable building codes are italicized.

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3 Performance Evaluation

3.1 MLT Ultralam™ LVL was evaluated to determine its resistance properties, which are used to develop reference design values for allowable stress design (ASD), load resistance factor design (LRFD), and limit states design (LSD). This TER examines MLT Ultralam™ LVL for the following:

3.1.1 Use as an alternative material to that described in *IBC* Chapter 23, in particular, compliance with the requirements noted in *IBC* Section 2302.1[4] and *IBC* Section 2303.1.10 for allowable stress design.

3.1.2 Use as an alternative material to that described in *IBC* Chapter 23, in particular, compliance with the requirements noted in *IBC* Section 2302.1[4] and *IBC* Section 2303.1.10 for load and resistance factor design.

3.1.3 Compliance with *IBC* Section 2304 and Section 2308 and *IRC* Chapter 5, Chapter 6, and Chapter 8 for conventional light frame construction applications.

3.1.4 Use as an alternative material and method of construction in compliance with *IBC* Section 104.11 and *IRC* Section R104.11.

3.1.4.1 When used in an application that exceeds the limits of *IRC* Section R301, an engineered design shall be submitted in accordance with *IRC* Section R301.1.3 and this TER.

3.1.5 Structural capacities in accordance with *IBC* Section 2303.1.10.

3.1.6 Structural capacities in accordance with *NBC* Part 4 and 9 and *CAN/CSA O86*.

3.1.7 Fire-resistance properties of MLT Ultralam™ LVL are outside the scope of this TER.

3.2 Any code compliance issues not specifically addressed in this section are outside the scope of this TER.

3.3 Any engineering evaluation conducted for this TER was performed within DrJ's ANAB accredited ICS code scope and/or the defined professional engineering scope of work on the dates provided herein.

4 Product Description and Materials

4.1 MLT Ultralam™ LVL is manufactured by Modern Lumber Technology, Ltd. (MLT) at its facility in Torzhok, Russia.

4.2 The product is manufactured by laminating wood veneers with an exterior type adhesive (complying with *ASTM D2559*) in a continuous process with the grain of the wood oriented parallel to the length of the member in accordance with an ISO 9001 quality certification system.

4.3 The wood veneer properties and species, adhesive, manufacturing parameters, and finished product dimensions and tolerances are specified in the approved quality documentation and MLT's in-plant manufacturing standard.

4.4 *Material Availability*

4.4.1 Thickness: 1½" (38 mm), 1¾" (44 mm), and 3½" (89 mm)

4.4.2 Nominal Depths: 3½" to 24" (89 to 610 mm)

4.4.3 Lengths: up to 60' (24.38 m)

5 Applications

5.1 *Structural Applications*

5.1.1 MLT Ultralam™ LVL is an alternative to sawn lumber for floor, roof, and wall structural members.

5.1.2 Structural applications include use as beams, columns, headers, joists, rafters, chords, and webs of trusses, I-joist flanges, rim boards, and wall studs.

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[4] 2015 *IBC* Section 2301.2

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5.2 *Design*

5.2.1 Design of MLT Ultralam™ LVL is governed by the applicable code and the provisions for Structural Composite Lumber (SCL) in *NDS*.

5.2.2 Unless otherwise noted, adjustment of the design stresses for duration of load shall be in accordance with the applicable code.

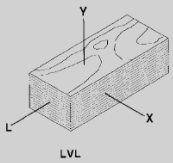
5.2.2.1 The design provisions for wood construction noted in *IBC* Section 2302.1[5] and *IRC* Section R301.1.3 apply to MLT Ultralam™ LVL for allowable stress design (ASD), unless otherwise noted in this report. Allowable unit stresses for MLT Ultralam™ LVL for dry conditions of use are specified in Table 1.

TABLE 1. REFERENCE DESIGN VALUES FOR MLT ULTRALAM™ LVL (ALLOWABLE STRESS DESIGN)[1,2,3]

Bending, F_b (psi) (MPa)	Tension, F_t (psi) (MPa)	Compression, F_c (psi) (MPa)		Horizontal Shear, F_v (psi) (MPa)	Modulus of Elasticity, E (psi) (MPa)		Shear Modulus of Elasticity (psi) (MPa)	Modulus of Elasticity for Beam & Column Stability, E_{min} (psi) (MPa)
Beam[5,6]	Parallel-to-Grain[7]	Parallel-to-Grain	Perpendicular-to-Grain[8]	Beam	True[4]	Apparent[4]		
2900 (20.0)	2150 (14.8)	3150 (21.7)	900 (6.2)	320 (2.2)	$2.0x10^6$ (13790)	$1.9x10^6$ (13100)	125,000 (862)	$1.0x10^6$ (6895)

SI: 1 psi = 0.00689 MPa or 1 MPa = 145 psi.

1. The reference design values in this table are applicable for the product used in dry, well-ventilated interior applications in which the equivalent moisture content of sawn lumber is less than 16%. See Section 9.3.4 of this report.
2. The reference design values in this table are for normal load duration. Loads of longer or shorter duration shall be adjusted in accordance with the applicable code. Duration of load adjustments shall not be applied to $F_{c\perp}$ and E.
3. Orientation nomenclature for Ultralam™ LVL:



4. The Apparent E for both beams and planks can be used directly in traditional beam deflection formulas. The True E values (i.e., shear-free) are for both beams and planks. Using True E, deflection is calculated as follows for uniformly loaded simple span beams.

   $\Delta = [5WL^4/(32Ebh^3)] + [12WL^2/(5Ebh)]$

   where: Δ = deflection in inches (mm)
   W = uniform load in lb/in (N/mm)
   L = span in inches (mm)
   E = modulus of elasticity in psi (MPa)
   b = width of beam in inches (mm)
   h = depth of beam in inches (mm)
5. The bending values in these tables are based on a referenced depth of 12" (305 mm). For other depths, the bending values shall be adjusted by a volume factor of $(12/d)^{0.162}$, where d is measured in inches with a minimum depth of 2" (51 mm).
6. When structural members qualify as repetitive members in accordance with the applicable code, a 4% increase is permitted.
7. Tension reference design value multiplied by a volume factor of $(3.58/L)^{0.125}$, with L measured in feet. Value limited to members 16" (406 mm) deep and less.
8. Compression value for Y-L plane only.

5.2.2.2 The design provisions for wood construction noted in *IBC* Section 2302.1[6] and *IRC* Section R301.1.3 apply to MLT Ultralam™ LVL for LRFD unless otherwise noted in this report. For compliance with the *NBC*, LSD shall be in accordance with *CAN/CSA O86*. Ultimate stresses for MLT Ultralam™ LVL for dry conditions of use are specified in Table 2.

[5] 2015 *IBC* Section 2301.2

[6] 2015 *IBC* Section 2301.2

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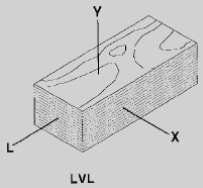
TABLE 2. SPECIFIED STRENGTHS FOR MLT ULTRALAM™ LVL (LIMIT STATES DESIGN)[1,2,3]

Bending, F_b (psi) (MPa)	Tension, F_t (psi) (MPa)	Compression, F_c (psi) (MPa)		Horizontal Shear, F_v (psi) (MPa)	Modulus of Elasticity, E (psi) (MPa)		Shear Modulus of Elasticity (psi) (MPa)	Modulus of Elasticity for Beam & Column Stability, E_{min} (psi) (MPa)
Beam[5,6]	Parallel-to-Grain[7]	Parallel-to-Grain	Perpendicular-to-Grain[8]	Beam	True[4]	Apparent[4]		
6090 (42.0)	4500 (31.0)	5990 (41.3)	1500 (10.3)	680 (4.7)	$2.0x10^6$ (13790)	$1.9x10^9$ (13100)	125,000 (862)	$1.0x10^6$ (6895)

SI: 1 psi = 0.00689 MPa or 1 MPa = 145 psi.

1. The reference design values in this table are applicable for the product used in dry, well-ventilated interior applications in which the equivalent moisture content of sawn lumber is less than 16%. See Section 9.3.4 of this report.
2. The design values in this table are for normal load duration. Loads of longer or shorter duration shall be adjusted in accordance with the applicable code. Duration of load adjustments shall not be applied to $F_{c\perp}$ and E.
3. Orientation nomenclature for Ultralam™ LVL:



LVL

4. The Apparent E for both beams and planks can be used directly in traditional beam deflection formulas. The True E value (i.e., shear-free) is for both beams and planks. Using True E, deflection is calculated as follows for uniformly loaded simple span beams.

   $\Delta = [5WL^4/(32Ebh^3)] + [12WL^2/(5Ebh)]$

   where: Δ = deflection in inches (mm)
   W = uniform load in lb/in (N/mm)
   L = span in inches (mm)
   E = modulus of elasticity in psi (MPa)
   b = width of beam in inches (mm)
   h = depth of beam in inches (mm)
5. The bending values in these tables are based on a referenced depth of 12" (305 mm). For other depths, the bending values shall be adjusted by a volume factor of $(12/d)^{0.162}$, where d is measured in inches with a minimum depth of 2" (51 mm).
6. When structural members qualify as repetitive members in accordance with the applicable code, a 4% increase is permitted.
7. Tension design value multiplied by a volume factor of $(3.58/L)^{0.125}$, with L measured in feet. Value limited to members 16" (406 mm) deep and less.
8. Compression value for Y-L plane only.

5.3 *Connections*

5.3.1 Lateral loads for nails, screws, and bolts, and withdrawal loads for nails and screws, installed in MLT Ultralam™ LVL shall be in accordance with the *NDS* and *CAN/CSA O86* for sawn lumber having a minimum specific gravity equal to that shown in in Table 3.

5.3.1.1 Fastener spacing shall be as prescribed in the applicable code (for sawn lumber), unless specifically indicated in Table 3 or Table 4 or as prescribed Part 12 of *NDS*.

5.3.1.2 Other nail spacing for specific applications, such as prefabricated steel components or hangers, may be used. Nail spacing for these applications should follow what is specified and detailed in the proprietary catalogues for the specific gravities as defined in Table 3.

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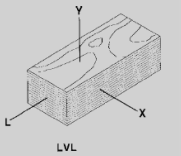
5.3.1.3 Allowable lateral loads for machine bolts installed perpendicular to the wide face of MLT Ultralam™ LVL (perpendicular to the glue lines), with loads applied parallel or perpendicular to the grain of the wood veneers, shall be as prescribed in the applicable code or in accordance with *NDS* for sawn lumber with the minimum specific gravity at least equivalent to that defined in Table 3.

TABLE 3. EQUIVALENT SPECIFIC GRAVITIES & MINIMUM FASTENER SPACING FOR DESIGN OF MECHANICAL CONNECTIONS[1,2,3]

Product	Fastener	Fastener Axis Orientation[1]	Load Direction	Equivalent Specific Gravity for Design Purpose	Maximum Spacing
Ultralam™ LVL	Nails	Y axis	Withdrawal	0.46	See footnote 4
		X axis	Withdrawal	0.45	
	Nails & Screws	Y axis	X and L	0.53	
	Bolts	Y axis	X axis	0.53	Per applicable code
		Y axis	L axis	0.49	

1. Orientation nomenclature for Ultralam™ LVL



2. Adjustment of the design stresses for duration of load shall be in accordance with the applicable code or *NDS*, as applicable.
3. Connection design values are as provided in *NDS* for sawn lumber having equivalent specific gravities as shown.
4. Spacing, edge distance, and end distance of nails installed perpendicular to the glue lines of the LVL are the same as those permitted in the applicable code for sawn lumber. Spacing of nails installed parallel to the glue lines of the LVL must be a minimum of 3" (76 mm) for 8d (0.131" x 2½") (3.3 mm x 63 mm) common nails, 4" (102 mm) for 10d (0.148" x 3") (3.8 mm x 76 mm) and 12d (0.148" x 3¼") (3.8 mm x 83 mm) common nails. End distances of nails installed parallel to the glue lines of the LVL must be a minimum of 2" (51 mm) for 8d (0.131" x 2 ½") (3.3 mm x 63 mm) common nails, 3" (76 mm) for 10d (0.148" x 3") (3.8 mm x 76 mm) and 12d (0.148" x 3¼") (3.8 mm x 83 mm) common nails. The minimum nail spacing must be 8" (204 mm) for 16d (0.162" x 3½") (4.1 mm x 89 mm) common nails installed parallel to the glue lines of the LVL that is at least 1¾" thick by 5½" wide (44mm by 133 mm), and the minimum end distance must be 3" (76 mm). Minimum edge distance must be sufficient to prevent splitting of the LVL. In addition, maximum nail penetration into the LVL must be limited as to prevent splitting.

5.3.1.4 Connection requirements for multiple member side-loaded beams are defined in the following assembly details (Figure 1) and have the maximum uniformly distributed load carrying capacity as defined in Table 4.

Assembly A (2-ply Beam)	Assembly B (3-ply Beam)	Assembly C (4-ply Beam)

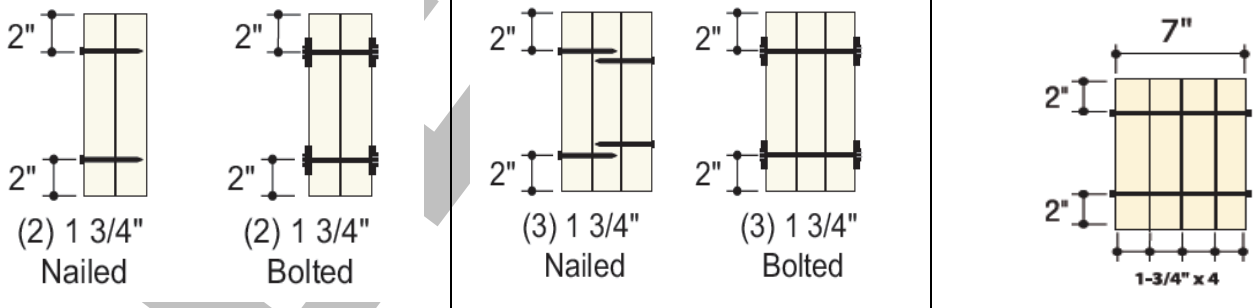


FIGURE 1. CONNECTION REQUIREMENTS FOR MULTIPLE MEMBER SIDE-LOADED BEAMS

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TABLE 4. MAXIMUM UNIFORMLY DISTRIBUTED LOAD (PLF) (KGM) CONNECTION REQUIREMENTS FOR MULTIPLE MEMBER EITHER SIDE-LOADED BEAMS[1,2,3,4,5,6]

Assembly Detail (see Figure 1)	2 Rows of 16d (0.162" x 3½") (4.1 mm x 89 mm) Nails at 12" o.c. (305 mm)	3 Rows of 16d (0.162" x 3½") (4.1 mm x 89 mm) Nails at 12" o.c. (305 mm)	2 Rows of 12d (0.148" x 3¼") (3.3 mm x 83 mm) Nails at 12" o.c. (305 mm)	3 Rows of 12d (0.148" x 3¼") (3.3 mm x 83 mm) Nails at 12" o.c. (305 mm)	2 Rows of ½" (13 mm) Bolts at 12" o.c.[7,8] (305 mm)
A	620 (923)	935 (1391)	520 (774)	785 (1168)	1480 (2203)
B[9]	465 (692)	700 (1042)	390 (580)	585 (871)	1110 (1652)
C	–	–	–	–	985 (1466)

SI: 1 plf = 1.488 kg/m

1. Multiply the appropriate table value by the following:
   - 1.5 for nails or bolts spaced at 8" o.c. (203 mm) per row
   - 2 for nails or bolts spaced at 6" o.c. (152 mm) per row
   - 3 for nails or bolts spaced at 4" o.c. (102 mm) per row
   - 0.5 for bolts spaced at 24" o.c. (610 mm) per row
2. Determine the appropriate beam size required to support the load before determining the connection requirements.
3. Screws can be used in place of bolts, provided additional fasteners are used such that the sum of the screw capacities is equal to or greater than that of the ½"-diameter bolts (13mm). Refer to the screw manufacturer's literature.
4. Tabulated values assume adequate end distance, edge distance, and spacing per Chapter 12 of *NDS*.
5. Tabulated values are for normal load duration. Adjustment of the design stresses for duration of load shall be in accordance with the applicable code or *NDS*, as applicable.
6. For beams greater than 4-plies wide, consult a registered design professional for the attachment requirements.
7. A standard cut steel washer of minimum 0.118" thickness (3 mm), with a minimum outside dimension of 1⅜" (35 mm), is required on each side of the beam between the wood and bolt head and nut.
8. Bolted connections assume full diameter bolts with bending yield strength (F_{yb}) of 45,000 psi (310 MPa).
9. Nailing is required from both sides for 3-ply beams.

5.4 Where the application exceeds the limitations set forth herein, design shall be permitted in accordance with accepted engineering procedures, experience, and technical judgment.

6 INSTALLATION

6.1 Installation shall comply with the manufacturer's installation instructions and this TER. In the event of a conflict between the manufacturer's installation instructions and this TER, the more restrictive shall govern.

6.2 *Installation Procedure*

6.2.1 *Drilling:*

6.2.1.1 Allowable horizontal hole placement shall follow the guidelines as shown in Figure 2.

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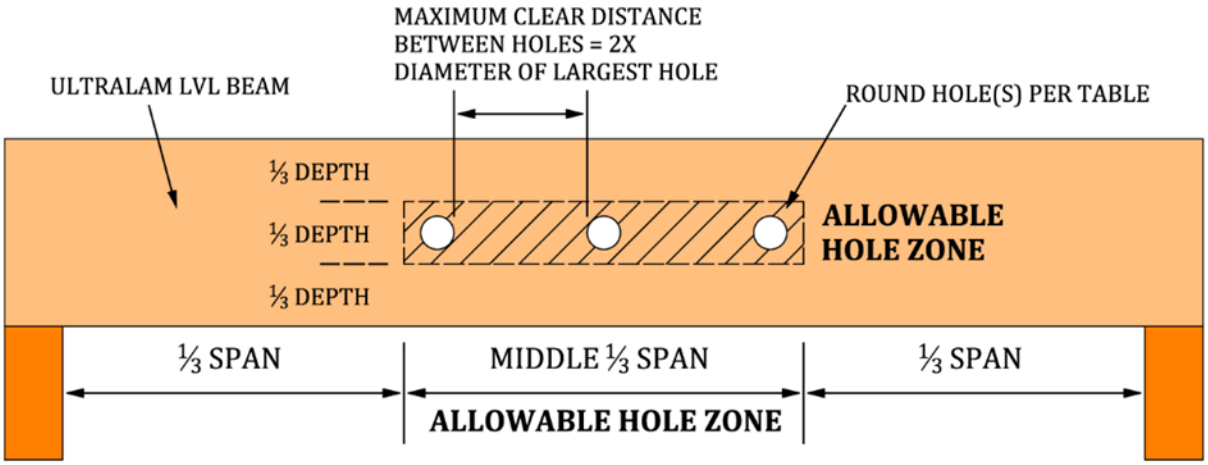
ALLOWABLE HORIZONTAL HOLES IN ULTRALAM LVL BEAM(S)



NOTES:
1) HOLE(S) MUST BE LOCATED COMPLETELY IN THE ALLOWABLE HOLE ZONE.
2) NO RECTANGULAR HOLES ARE ALLOWED.
3) NO MORE THAN THREE (3) HOLES ALLOWED PER SPAN.
4) TABLE IS VALID FOR SIMPLE SPAN, UNIFORMLY LOADED BEAMS ONLY. TABLE IS NOT VALID FOR CANTILEVER SECTIONS.
5) HOLE LOCATION, CLEARANCE AND EFFECT OF BEAM DEFLECTION SHOULD BE CONSIDERED TO AVOID PROBLEMS WITH PIPING.
6) ALL CONNECTIONS OF BEAMS TO SUPPORTS SHALL BE DESIGNED BY OTHERS.
7) NOTCHING OF BEAM NOT PERMITTED.

ALLOWABLE HOLE SIZES

BEAM DEPTH	MAX ROUND HOLE DIAMETER
7¼" - 9¼"	1½"
9½" - 16"	2"
DEEPER THAN 16"	3"

FIGURE 2. HORIZONTAL HOLE PLACEMENT

7 SUBSTANTIATING DATA

7.1 Testing has been performed under the supervision of a professional engineer and/or under the requirements of ISO/IEC 17025 as follows:

7.1.1 Mechanical properties testing in accordance with *ASTM D5456*

7.1.2 Adhesive strength testing in accordance with *ASTM D5055*, *ASTM D7247*, and *ASTM D2559*

7.2 Information contained herein is the result of testing and/or data analysis by sources which conform to *IBC* Section 1703 and/or professional engineering regulations. DrJ relies upon accurate data to perform its ISO/IEC 17065 evaluations.

7.3 Where appropriate, DrJ's analysis is based on provisions that have been codified into law through state or local adoption of codes and standards. The providers of the codes and standards are legally responsible for their content. DrJ analysis may use code-adopted provisions as a control sample. A control sample versus a test sample establishes a product as being equivalent to that prescribed in this code in quality, *strength*, effectiveness, *fire resistance*, durability, and safety. Where the accuracy of the provisions provided herein is reliant upon the published properties of materials, DrJ relies upon the grade mark, grade stamp, mill certificate, and/or test data provided by material suppliers to be minimum properties. DrJ analysis relies upon these properties to be accurate.

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8 FINDINGS

8.1 When used and installed in accordance with this TER and the manufacturer's installation instructions, the product MLT Ultralam™ LVL complies with or is a suitable alternative to the requirements of *IBC* Chapter 23; *IRC* Chapter 5, Chapter 6, and Chapter 8; and *NBC* Section 1.2, Subsection 4.3.11, and Section 9.23.

8.2 This product has been evaluated in the context of the codes listed in Section 2 and is compliant with all known state and local building codes. Where there are known variations in state or local codes applicable to this TER, they are listed here.

8.2.1 No known variations

8.3 Building codes require data from valid *research reports* be obtained from *approved sources* (i.e., licensed *registered design professionals* [RDPs]).

8.3.1 Building official approval of a licensed RDP is performed by verifying the RDP and/or their business entity is listed by the licensing board of the relevant *jurisdiction*.

8.4 Agencies who are accredited through ISO/IEC 17065 have met the code requirements for approval by the *building official*. DrJ is an ISO/IEC 17065 ANAB-Accredited Product Certification Body – Accreditation #1131 and employs RDPs.

8.5 Through ANAB accreditation and the IAF MLA, DrJ certification can be used to obtain product approval in any *jurisdiction* or country that has IAF MLA Members & Signatories to meet the Purpose of the MLA – "certified once, accepted everywhere."

8.6 *IBC* Section 104.11 (*IRC* Section R104.11 and *IFC* Section 104.10[7] are similar) states:

> **104.11 Alternative materials, design and methods of construction and equipment.** The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code…Where the alternative material, design or method of construction is not *approved*, the *building official* shall respond in writing, stating the reasons the alternative was not *approved*.

9 CONDITIONS OF USE

9.1 MLT Ultralam™ LVL shall be installed in accordance with the applicable code, the approved construction documents, this TER, and the manufacturer's installation instructions. If there is a conflict between this report and the manufacturer's instructions, the more restrictive shall govern.

9.2 The manufacturer's published installation instructions shall be available at the jobsite at all times during installation.

9.3 MLT Ultralam™ LVL complies with or is a suitable alternative to sawn lumber as permitted by the codes listed in Section 2, subject to the following conditions:

9.3.1 Design calculations and details shall be furnished to the code official verifying that the material is used in compliance with this TER. The calculations must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

9.3.2 The design values shall not exceed those set forth in this report as modified by all applicable table notes.

9.3.3 The service conditions for MLT Ultralam™ LVL with fire-retardant or preservative chemical treatments are outside the scope of this report.

9.3.4 The service conditions for MLT Ultralam™ LVL are dry conditions of use, for which the equilibrium moisture content must be less than 16%. Uses in applications exceeding 16% moisture content are outside the scope of this TER.

9.3.5 Fastener design values shall be for the Equivalent Specific Gravity for Design Purposes as specified in Table 3 of this report.

[7] 2018 *IFC* Section 104.9

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9.3.6 Cutting and notching of MLT Ultralam™ LVL is prohibited, except where specifically permitted by the manufacturer's recommendations or where the effects of such alterations are specifically considered in the design of the member by a registered design professional.

9.3.7 Increases for duration of load shall be in accordance with the limitations of the applicable building code.

9.3.8 Where use of MLT Ultralam™ LVL qualifies as repetitive members as defined in *NDS*, an increase of 4% is permitted in allowable bending stresses.

9.3.9 MLT Ultralam™ LVL may be cut to the specified length and width as appropriate for the application, provided the depth is no less than 3½" (89 mm) wide. The thickness may not be cut.

9.3.10 Minimum bearing length and anchorage of MLT Ultralam™ LVL shall meet the requirements of *IBC* Chapter 23 or Division B, Article 9.23 of the *NBC* for sawn lumber.

9.3.11 MLT Ultralam™ LVL shall be fabricated in the Modern Lumber Technology facilities located in Torzhok, Russia, with quality control inspections by an approved third-party quality control inspection agency.

9.4 Where required by the *building official*, also known as the authority having jurisdiction (AHJ) in which the project is to be constructed, this TER and the installation instructions shall be submitted at the time of *permit* application.

9.5 Any generally accepted engineering calculations needed to show compliance with this TER shall be submitted to the AHJ for review and approval.

9.6 Design loads shall be determined in accordance with the building code adopted by the *jurisdiction* in which the project is to be constructed and/or by the building designer (e.g., *owner* or RDP).

9.7 At a minimum, this product shall be installed per Section 6 of this TER.

9.8 This product has an internal quality control program and a third-party quality assurance program in accordance with *IBC* Section 104.4 and Section 110.4 and *IRC* Section R104.4 and Section R109.2.

9.9 The actual design, suitability, and use of this TER, for any particular building, is the responsibility of the *owner* or the owner's authorized agent.

9.10 This TER shall be reviewed for code compliance by the AHJ in concert with *IBC* Section 104.

9.11 The implementation of this TER for this product is dependent on the design, quality control, third-party quality assurance, proper implementation of installation instructions, inspections required by *IBC* Section 110.3, and any other code or regulatory requirements that may apply.

10 Identification

10.1 The product(s) listed in Section 1.1 are identified by a label on the board or packaging material bearing the manufacturer's name, product name, TER number, and other information to confirm code compliance.

10.2 Additional technical information can be found at ultralam.com/uk.

11 Review Schedule

11.1 This TER is subject to periodic review and revision. For the most recent version, visit drjcertification.org.

11.2 For information on the current status of this TER, contact DrJ Certification.

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