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STRUCTURAL ENGINEERING

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CA # 9195

PRODUCT EVALUATION REPORT

MANUFACTURER:

Loadmaster Systems, Inc.
3100 Northwoods Place, Suite E
Peachtree Corners, GA 30071
(770) 381-6067

This item has been digitally signed and sealed by John Southard, P.E. (FL PE 57599) on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

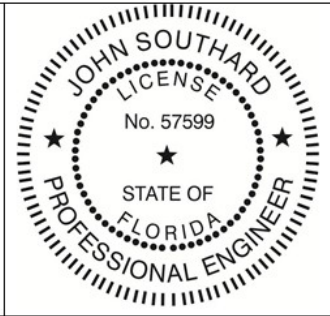
SUBJECT:

The Loadmaster Roof Deck
System Assembly

PRODUCT CATEGORY:

Structural Component: Roof
Deck

This item has been digitally signed and sealed by John Southard, P.E. (FL PE 57599) on 20 December 2023. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies. Southard Engineering, Inc., 4566B NW 5th Blvd., Gainesville FL 32609 (FL CA 9195)



ROOF DECK ASSEMBLY DESCRIPTION:

The Loadmaster Roof Deck Assembly is a roofing substrate, including metal deck and Duraflex mineral board (FPA FL 5498.R5, Miami-Dade NOA 22-0907.03), specifically designed as a suitable substrate assembly for the application of any roof covering with Florida Product Approval(FPA), included but not limited to, shingles, slate, synthetic slate, tile, metal shingles, standing seam metal roof, and fully-adhered roof membranes(such as BUR, modified bitumen, TPO, PVC, etc.). The roof system designer shall select components for each layer that meet the gravity and wind load requirements of the project per this evaluation report.

CODE CRITERIA:

Florida Building Code 2020:
Chapter 22: Steel – 2209.1
UL 1897 - 2015

John
Southard

Digitally signed
by John
Southard
Date: 2023.12.20
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CODE COMPLIANCE CERTIFICATION:

As product evaluator, the undersigned certifies that the listed products are in compliance with the requirements of the 2023 Florida Building Code.

John Southard, M.S., P.E.
Florida PE# 57599

Date of Report: December 20th, 2023

COMPONENT 1: STRUCTURAL ROOF DECK COMPONENT:**PRODUCT DESCRIPTION:**

The structural roof deck selected shall be one of the following nine roof deck types:

1. 1 ½" deep x 22-GA Super Span 150 roof deck ($f_y = 80$ ksi)
2. 1 ½" deep x 20-GA Super Span 150 roof deck ($f_y = 80$ ksi)
3. 1 ½" deep x 18-GA Super Span 150 roof deck ($f_y = 80$ ksi)
4. 15/16" deep x 25-GA Heavy Duty roof deck ($f_y = 80$ ksi)
5. 15/16" deep x 24-GA Heavy Duty roof deck ($f_y = 80$ ksi)
6. 15/16" deep x 22-GA Heavy Duty roof deck ($f_y = 80$ ksi)

BASIS OF EVALUATION:

Structural load carrying capacity is based on rational analysis through the application of S100-16 (2020) "North American Specification for the Design of Cold-formed Steel Structural Member, 2020."

LIMITATIONS AND CONDITIONS USE:

1. This compliance is not for use in High Velocity Hurricane Zones (HVHZ).
2. For the deck selected in component #1 the gravity loads from the worst case load combination shall be less than the allowable load limits shown in the allowable load tables on sheets 3 and 4.
3. For the deck selected the maximum uplift loads resulting from the $0.6*WL + 0.6*DL$ load combination shall be less than the allowable uplift load tables shown on sheets 3 and 4.
4. Use as a diaphragm is optional. If used as a diaphragm the engineer of record shall evaluate the roof deck connections for uplift and shear load combinations per DDM-04 "*Diaphragm Design Manual*" and AISI S310-16, "*North American Standard for the Design of Profiled Steel Diaphragm Panels*".
5. Steel supporting structural deck below shall be at least as thick as the structural deck.

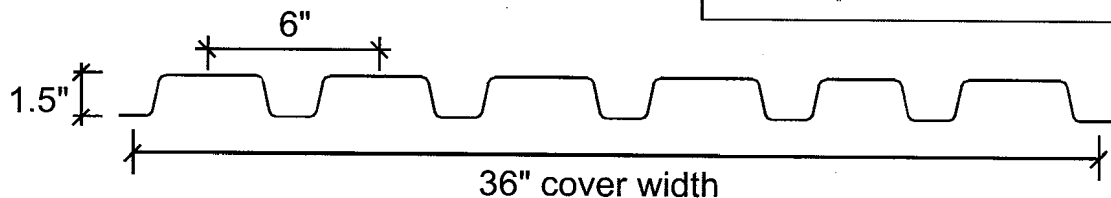
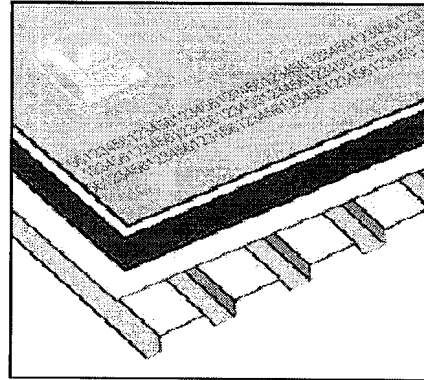
TECHNICAL DOCUMENTION SUPPORTING COMPLIANCE STATEMENT:

1. Allowable load tables on sheets 3 and 4

Loadmaster Super Span 150

High-Tensile Steel Section

Super Span 150 is a high-tensile steel section rolled from 80,000 psi minimum yield steel in a 1-1/2" deep profile. Super Span 150 is available in gray primer coated, G-60 or G-90 galvanized. It is available in acoustical and non-acoustical profiles.



Gauge	22	20	18	16
Design Thickness (in.)	0.0295	0.0358	0.0474	0.06
Nominal Pitch (in.)	6	6	6	6
Nominal Depth (in.)	1.5	1.5	1.5	1.5
Cover Width (in.)	36	36	36	36
Weight - Painted (psf)	1.7	2.1	2.8	3.5
Weight - Galvanized (psf)	1.8	2.2	2.9	3.6
Moment of Inertia (pos.) in. ⁴	0.1517	0.1968	0.2839	0.3739
Moment of Inertia (neg.) in. ⁴	0.1824	0.2220	0.2945	0.3736
Section Modulus (pos.) in. ³	0.1786	0.2213	0.3013	0.3884
Section Modulus (neg.) in. ³	0.1859	0.2320	0.3111	0.3938
Minimum Yield Strength (ksi)	80	80	80	80
Allowable Flexural Strength (ksi)	36	36	36	36

3 span condition ▲▲▲▲	Safe Uniform Total Load Table in PSF									
	Center to Center Support Spacing									
	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	10'-0"
SS150 22 ga.	146	121	102	87	75	65	58	51	46	37
SS150 20 ga.	182	151	127	109	94	82	72	64	57	46
SS150 18 ga.	244	203	171	146	126	110	97	86	76	62
SS150 16 ga.	309	256	216	184	159	139	122	108	97	78

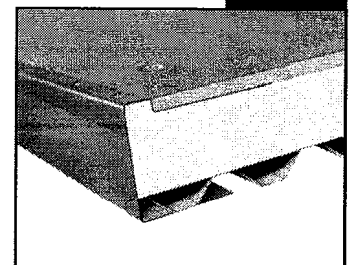
- Physical properties were computed in accordance with specifications section of the "Cold Formed Steel Design Manual" published by the American Iron and Steel Institute (AISI) and also conform to the specifications of the Steel Deck Institute.
- Steel Sections are rolled from steel conforming to ASTM specification A-611 Grade E (minimum) for painted or ASTM specification ASTM-A653 for galvanized finish.
- Acoustical steel sections sustain 95% of the loads printed in the table..



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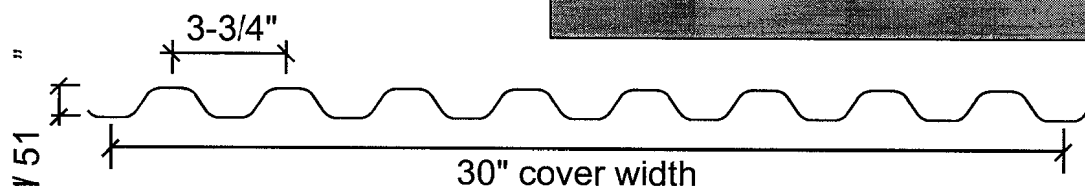
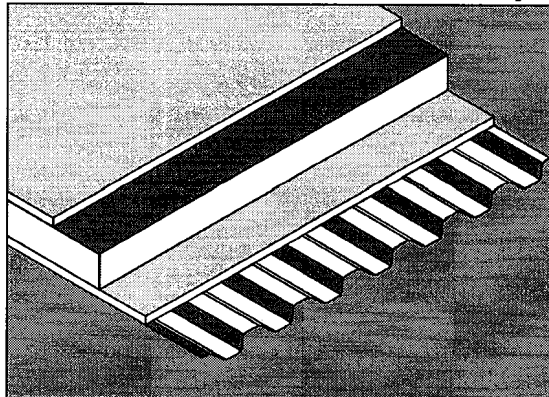
Loadmaster Super Span 150

Loadmaster Heavy Duty

High-Tensile Steel Section

Heavy Duty is a high-tensile steel section rolled from 80,000 psi minimum yield steel in a 15/16" deep profile. Heavy Duty is available in white primer coated, G-60 or G-90 galvanized.

Heavy Duty Dual Board Insulated Assembly



Section Properties

Gauge Number	25	24	22
Design Thickness (in.)	0.0205	0.0239	0.0299
Nominal Pitch (in.)	3.75	3.75	3.75
Nominal Depth (in.)	0.9375	0.9375	0.9375
Cover Width (in.)	30	30	30
Weight - Painted (psf)	1.04	1.24	1.57
Weight - Galvanized (psf)	1.13	1.36	1.68
Moment of Inertia (pos.)	0.042	0.049	0.061
Moment of Inertia (neg.)	0.042	0.049	0.061
Section Modulus (pos.)	0.084	0.098	0.121
Section Modulus (neg.)	0.084	0.098	0.121
Minimum Yield Strength (ksi)	80	80	80
Allowable Flexural Strength (ksi)	36	36	36

Safe Uniform Total Load Table in PSF

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports							
		4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"
2	HD-25	121	96	72	58	48	40	--	--
	HD-24	123	98	74	60	52	44	--	--
	HD-22	140	119	100	82	67	55	49	41

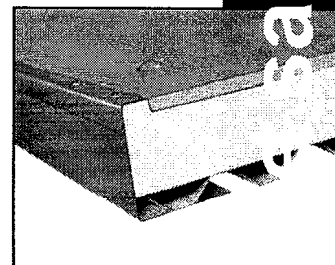
- Physical properties were computed in accordance with specifications section of the "Cold Formed Steel Design Manual" published by the American Iron and Steel Institute (AISI) and also conform to the specifications of the Steel Deck Institute.
- Steel Sections are rolled from cold steel conforming to ASTM specification A-611 Grade E (minimum) for painted or ASTM specification ASTM-A653 Grade 80 for galvanized finish.
- Steel is roller coat painted with flexible primer, then oven cured.
- Galvanized coating applied to the steel conforms to ASTM specification ASTM-A924 class G90 or G60.



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COMPONENT 2: FASTENER PATTERNS FOR STRUCTURAL ROOF DECK:**PRODUCT DESCRIPTION:**

The fastener type must be either 5/8" puddle welds, #12 HWH TEK screws, or 16-GA weld washers with 3/8" diameter holes.

BASIS OF EVALUATION:

Structural load carrying capacity is based on rational analysis through the application of S100-16 (2020) "North American Specification for the Design of Cold-formed Steel Structural Members, 2020."

LIMITATIONS AND CONDITIONS USE:

1. This compliance is not for use in High Velocity Hurricane Zones (HVHZ).
2. For the deck selected as component #1, select a fastener attachment pattern from on the load tables on pages 7 through 20 that has an allowable uplift wind pressure that exceeds the worst case uplift wind pressures as determined by ASCE 7-22 ASD load combinations for each roof uplift zone.
3. Use as a diaphragm is optional. If used as a diaphragm the engineer of record shall evaluate the deck connections for uplift and shear load combinations per DDM-04 "Diaphragm Design Manual".
4. Steel supporting structural deck below shall be at least as thick as the structural deck.

TECHNICAL DOCUMENTATION SUPPORTING COMPLIANCE STATEMENT:

1. Allowable load tables on sheets 7 through 20.

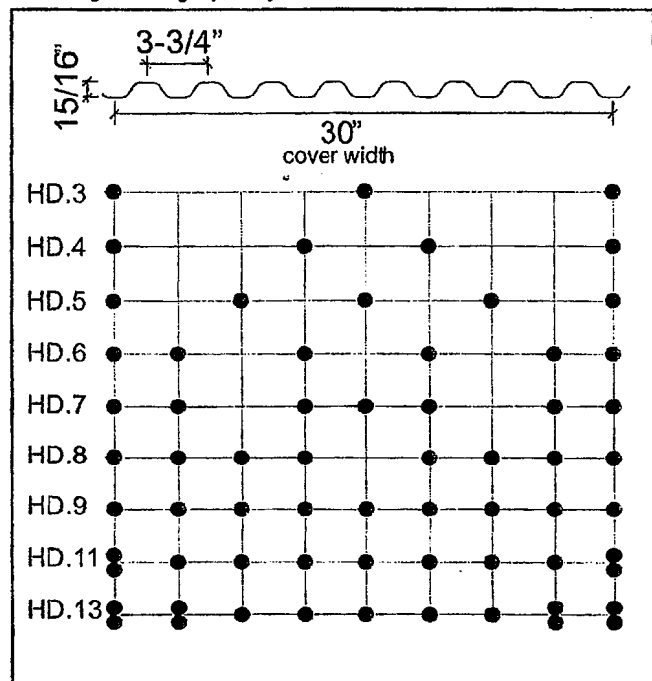


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Systems, Inc.**

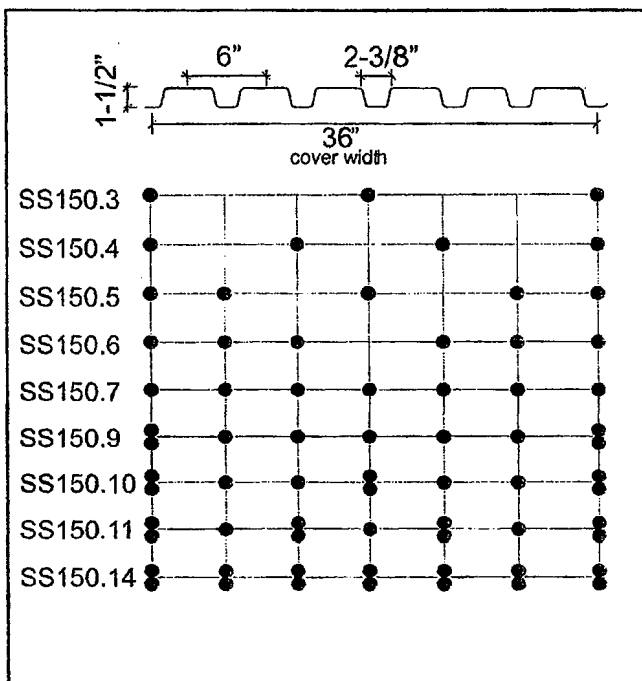
attachment guide

Loadmaster Steel Deck Attachment Configurations

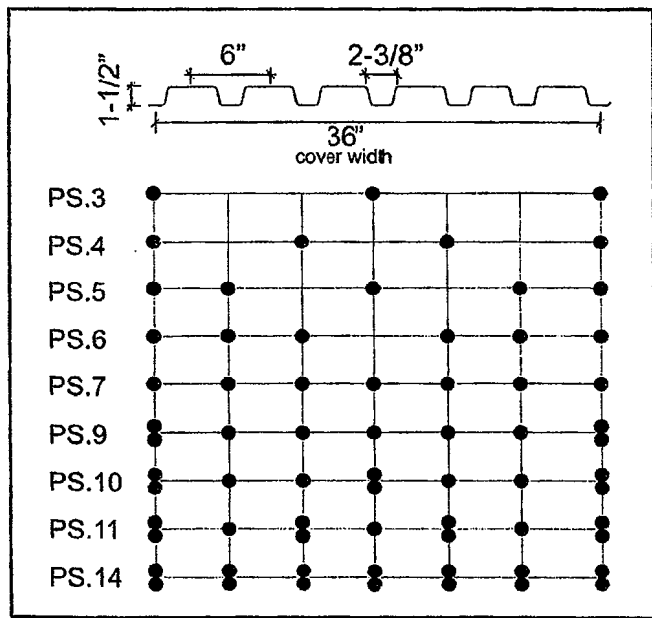
Heavy Duty (HD)



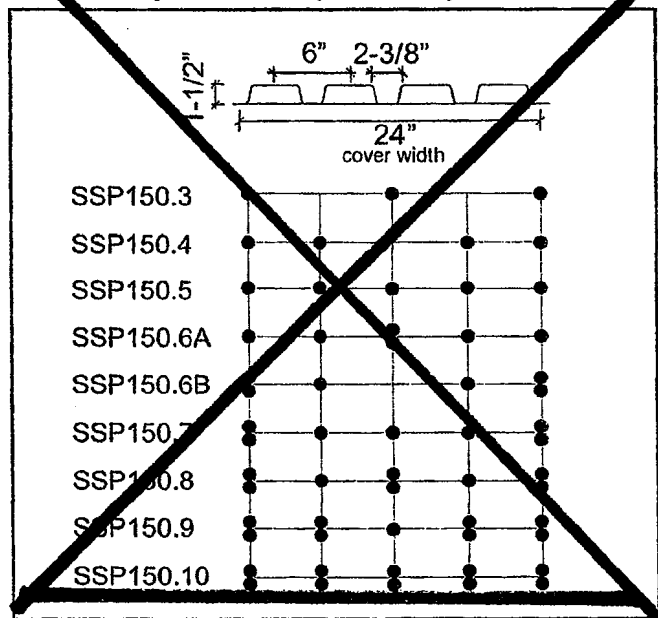
Super Span 150 (SS150)



Pyro Span (PS)



Super Span F 150 (SSF 150)



**22-GA, 20-GA, and 18-GA
SUPER SPAN 150 PATTERN SS150.7**

Buildex #12-14 HWH TEK/2												
Minimum truss top chord thickness = 22-GA or						0.0295	in		Min. F _u =			
						ksi						
Span Type	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
1-span	81.2	72.2	65.0	59.1	54.2	50.0	46.4	43.3	40.6	38.2	36.1	34.2
2-span	35.6	31.7	28.5	25.9	23.8	21.9	20.4	19.0	17.8	16.8	15.8	15.0
3-span	35.6	31.7	28.5	25.9	23.8	21.9	20.4	19.0	17.8	16.8	15.8	15.0

- 1) Loads listed above are allowable uplift wind pressures (lb/ft^2) for this fastener attachment pattern only
- 2) User of table must make sure that steel truss top chords have the same grade of steel as indicated above.
- 3) All screws must be Buildex or an approved equivalent. The structural engineer of record must approve fastener equivalency or local product approval must be obtained.
- 4) Allowable pullout load for Buildex fastener used in the above table above is equal to **81.2 lb.**
- 5) Allowable pullover strength for fasteners does not control for the attachment design for the 22-GA, 20-GA, or 18-GA Super Span roof deck. Allowable pullover strength = **276 lb.**
- 6) Capacities are based on Allowable Strength Design (ASD) and include safety factor of 3.0.
- 7) All screws must maintain a minimum edge distance of $1/2"$ and a minimum spacing of $3/4"$.
- 8) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.

⑧

- 1) Loads listed above are allowable uplift wind pressures (lb/ft^2) for this fastener attachment pattern only
- 2) User of table must make sure that steel truss top chords have the same grade of steel as indicated above.
- 3) All screws must be Buildex or an approved equivalent. The structural engineer of record must approve fastener equivalency or local product approval must be obtained.
- 4) Allowable pullout load for Buildex fastener used in the above table above is equal to **95.3 lb.**
- 5) Allowable pullover strength for fasteners does not control for the attachment design for the 22-GA, 20-GA, or 18-GA Super Span roof deck. Allowable pullover strength = **276 lb.**
- 6) Capacities are based on Allowable Strength Design (ASD) and include safety factor of 3.0.
- 7) All screws must maintain a minimum edge distance of $1/2"$ and a minimum spacing of $3/4"$.
- 8) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.

**22-GA, 20-GA, and 18-GA
SUPER SPAN 150 PATTERN SS150.7
ALLOWABLE UPLIFT WIND PRESSURE TABLE (PSF)**

22-GA, 20-GA, and 18-GA
SUPER SPAN 150 PATTERN SS150.7
ALLOWABLE UPLIFT WIND PRESSURE TABLE (PSF)

20-GA SUPER SPAN 150 PATTERN SS150.7 ALLOWABLE UPLIFT WIND PRESSURE TABLE (PSF)

5/8" Puddle Welds using E70xx Electrode											
Steel deck shall be minimum 33ksi steel											
Span Type	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"
1-span	535.8	476.3	428.6	389.7	357.2	329.7	306.2	285.8	267.9	252.1	238.1
2-span	235.0	208.9	188.0	170.9	156.7	144.6	134.3	125.3	117.5	110.6	104.4
3-span	235.0	208.9	188.0	170.9	156.7	144.6	134.3	125.3	117.5	110.6	104.4

- 1) Loads listed above are allowable uplift wind pressures (lb/ft²) for this fastener attachment pattern only
- 2) Ultimate tensile strength of puddle weld = **1410.0 lb.**
- 3) Allowable wind pressures are based on a factor of safety of 2.5.
- 4) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.
- 5) Allowable load per weld = Ultimate tensile strength per weld * 0.95 side lap weld reduction factor/ 2.5 factor of safety
Allowable tensile load per weld = **535.8 lb.**

**18-GA SUPER SPAN 150 PATTERN SS150.7
ALLOWABLE UPLIFT WIND PRESSURE TABLE (PSF)**

5/8" Puddle Welds using E70xx Electrode												
Steel deck shall be minimum 33ksi steel												
Span Type	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
1-span	695.4	618.1	556.3	505.7	463.6	427.9	397.4	370.9	347.7	327.2	309.1	292.8
2-span	305.0	271.1	244.0	221.8	203.3	187.7	174.3	162.7	152.5	143.5	135.6	128.4
3-span	305.0	271.1	244.0	221.8	203.3	187.7	174.3	162.7	152.5	143.5	135.6	128.4

- 1) Loads listed above are allowable uplift wind pressures (lb/ft²) for this fastener attachment pattern only
 - 2) Ultimate tensile strength of puddle weld = **1830.0 lb.**
 - 3) Allowable wind pressures are based on a factor of safety of 2.5.
 - 4) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.
 - 5) Allowable load per weld = Ultimate tensile strength per weld * 0.95 side lap weld reduction factor/ 2.5 factor of safety
- Allowable tensile load per weld = **695.4 lb.**

22-GA, 24-GA, & 25-GA HEAVY DUTY PATTERN HD.9 ALLOWABLE UPLIFT WIND PRESSURE TABLE (PSF)

Buildex #12-14 HWH TEK/2												
Minimum truss top chord thickness = 20-GA or					0.0346	in	Min. F_u =		45	ksi		
Span Type	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
1-span	152.5	135.5	122.0	110.9	101.6	93.8	87.1	81.3	76.2	71.7	67.8	64.2
2-span	66.9	59.4	53.5	48.6	44.6	41.2	38.2	35.7	33.4	31.5	29.7	28.2
3-span	66.9	59.4	53.5	48.6	44.6	41.2	38.2	35.7	33.4	31.5	29.7	28.2

- 1) Loads listed above are allowable uplift wind pressures (lb/ft^2) for this fastener attachment pattern only
- 2) User of table must make sure that steel truss top chords have the same grade of steel as indicated above.
- 3) All screws must be Buildex or an approved equivalent. The structural engineer of record must approve fastener equivalency or local product approval must be obtained.
- 4) Allowable pullout load for Buildex fastener used in the above table above is equal to **95.3 lb.**
- 5) Allowable pullover strength for fasteners does not control for the attachment design for the 25-GA, 24-GA, or 22-GA Heavy Duty roof deck. Allowable pullover strength = **192 lb** (for 25-ga deck).
- 6) Capacities are based on Allowable Strength Design (ASD) and include safety factor of 3.0.
- 7) All screws must maintain a minimum edge distance of $1/2"$ and a minimum spacing of $3/4"$.
- 8) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.

22-GA, 24-GA, & 25-GA HEAVY DUTY PATTERN HD.9 ALLOWABLE UPLIFT WIND PRESSURE TABLE (PSF)

Buildex #12-14 HWH TEK/2																		
Minimum truss top chord thickness = 18-GA or					0.0451	in		Min. F_u =		45 ksi								
Span Type	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"						
1-span	198.7	176.6	159.0	144.5	132.5	122.3	113.6	106.0	99.4	93.5	88.3	83.7						
2-span	87.2	77.5	69.7	63.4	58.1	53.6	49.8	46.5	43.6	41.0	38.7	36.7						
3-span	87.2	77.5	69.7	63.4	58.1	53.6	49.8	46.5	43.6	41.0	38.7	36.7						

- 1) Loads listed above are allowable uplift wind pressures (lb/ft^2) for this fastener attachment pattern only
- 2) User of table must make sure that steel truss top chords have the same grade of steel as indicated above.
- 3) All screws must be Buildex or an approved equivalent. The structural engineer of record must approve fastener equivalency or local product approval must be obtained.
- 4) Allowable pullout load for Buildex fastener used in the above table above is equal to **124.2 lb.**
- 5) Allowable pullover strength for fasteners does not control for the attachment design for the 25-GA, 24-GA, or 22-GA Heavy Duty roof deck. Allowable pullover strength = **192 lb** (for 25-ga deck).
- 6) Capacities are based on Allowable Strength Design (ASD) and include safety factor of 3.0.
- 7) All screws must maintain a minimum edge distance of $1/2"$ and a minimum spacing of $3/4"$.
- 8) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.

Buildex #12-14 HWH TEK/2												
Minimum truss top chord thickness = 16-GA or												
		4'-0"		4'-6"		5'-0"		0.0566		in		
										Min. F_u =		
										45 ksi		
Span Type	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
1-span	249.4	221.7	199.5	181.4	166.3	153.5	142.5	133.0	124.7	117.4	110.8	105.0
2-span	109.4	97.2	87.5	79.6	72.9	67.3	62.5	58.3	54.7	51.5	48.6	46.1
3-span	109.4	97.2	87.5	79.6	72.9	67.3	62.5	58.3	54.7	51.5	48.6	46.1

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22-GA HEAVY DUTY PATTERN HD.5 ALLOWABLE UPLIFT WIND PRESSURE TABLE (PSF)

5/8" Puddle Welds using E70xx Electrode												
Steel deck shall be a minimum 80 ksi steel												
Span Type	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
1-span	349.3	310.5	279.4	254.0	232.9	214.9	199.6	186.3	174.6	164.4	155.2	147.1
2-span	153.2	136.2	122.6	111.4	102.1	94.3	87.5	81.7	76.6	72.1	68.1	64.5
3-span	153.2	136.2	122.6	111.4	102.1	94.3	87.5	81.7	76.6	72.1	68.1	64.5

- 1) Loads listed above are allowable uplift wind pressures (lb/ft²) for this fastener attachment pattern only
- 2) Ultimate tensile strength of puddle weld = **1180.0** lb.
- 3) Allowable wind pressures are based on a factor of safety of 2.5.
- 4) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.
- 5) Allowable load per weld = Ultimate tensile strength per weld * 0.925 side lap weld reduction factor/ 2.5 factor of safety
Allowable tensile load per weld = **436.6** lb.

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- 1) Loads listed above are allowable uplift wind pressures (lb/ft²) for this fastener attachment pattern only
- 2) Ultimate tensile strength of weld washer = **1522.0 lb.**
- 3) Allowable wind pressures are based on a factor of safety of 2.5.
- 4) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.
- 5) Allowable load per weld = Ultimate tensile strength per weld washer * 0.925 side lap weld reduction factor/ 2.5 factor of safety

Allowable tensile load per weld washer = **563.14 lb.**

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- 1) Loads listed above are allowable uplift wind pressures (lb/ft^2) for this fastener attachment pattern only
- 2) Ultimate tensile strength of weld washer = **1475.0** lb.
- 3) Allowable wind pressures are based on a factor of safety of 2.5.
- 4) The span factor used for 2-span and 3-span conditions is 1.14 to account for continuous spans.
- 5) Allowable load per weld = Ultimate tensile strength per weld washer * 0.925 side lap weld reduction factor/ 2.5 factor of safety

Allowable tensile load per weld washer = **545.75** lb.

COMPONENT 3: INSULATION OPTIONAL:**PRODUCT DESCRIPTION:**

Loadmaster isocyanurate or expanded polystyrene insulation of varying thicknesses is optional. The Loadmaster Roof Deck Assembly can be designed to include rigid board insulation or not.

BASIS OF EVALUATION:

FBC 1508.1 and FBC 1508.2

LIMITATIONS AND CONDITIONS USE:

1. This compliance is not for use in High Velocity Hurricane Zones (HVHZ).
2. A minimum roof slope of ¼":12" is required.
3. The insulation must meet the requirements of FBC 1508.1 and 1508.2.

TECHNICAL DOCUMENTATION SUPPORTING COMPLIANCE STATEMENT:

1. See test UL 1897 reports 72931.01-109-44, 72935.01-109-44, and 72930.01-109-44 in Appendix A.

Loadmaster Isocyanurate Insulation

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Description: Loadmaster Polyisocyanurate thermal insulation is a thermoset, closed-cell isocyanurate foam core integrally bonded to glass fiber/organic mat facers on both sides. Individual insulation panels measure 4 ft. x 8 ft.

Property	Test Method	Value
Density	ASTM D1622	Nom. 2.0 pcf
Compressive Strength at 10% consolidation	ASTM D1621	20 psi
Dimensional Stability (7 days @ 158°F/90-100% R.H.)	ASTM D2126	<2% linear change
Water Absorption (Volume) (2 hr. immersion)	ASTM C209	1% max.
Water Vapor Transmission	ASTM E96	<1.5 perm
Laminar Tensile Strength	ASTM C209	4 psi min.
Flame Spread	ASTM E84	35 or less

The physical properties listed above are presented as typical average foam core values as determined by accepted ASTM test methods and are subject to normal manufacturing variation. This data is offered as a service to our customers and is subject to change without notice.

Federal Specifications: Loadmaster Isocyanurate thermal insulation meets the physical property requirements in Federal Specification HH-1-1972/2.

Packaging and Storage: Loadmaster Isocyanurate thermal insulation is packaged in a plastic protective cover that provides temporary protection for the material during shipment. Once the Loadmaster Isocyanurate thermal insulation has been received at the jobsite, the plastic protective cover must be removed and the material then protected with a breathable type weatherproof covering such as a tarpaulin.

R-Values

Thickness	RIC-TIMA (RT)		Long Term Thermal Resistance (LTTR)	
	Summer R-Values	Winter R-Values	Summer R-Values	Winter R-Values
1.0"	9.37	8.94	8.82	8.27
1.5"	12.95	12.50	11.82	11.27
2.0"	16.75	16.25	14.92	14.37
2.5"	20.50	20.07	18.12	17.57
3.0"	24.23	23.90	21.32	20.77
3.5"	28.26	27.82	24.52	23.97
4.0"	31.87	31.40	27.82	27.27

R-values based upon Loadmaster Basic Assembly with one layer of 1/2" Duraflex Mineral Board.

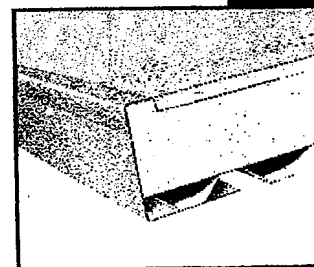
Isocyanurate



**LOADMASTER
SYSTEMS, INC.**

(800) 527-4035 Fax: (770) 381-1783

www.loadmaster.net



Loadmaster Expanded Polystyrene (EPS)

23

Description: Loadmaster expanded polystyrene thermal insulation is manufactured in block form using Flint Hill Resources Grade 54 EPS modified bead material and then cut into 4 ft. x 8 ft. boards in the thickness desired.

Property	Test Method	Value
Density		Nom. 1.0 pcf
Compressive Strength at 10% deformation	ASTM D1621	10 psi minimum
Water Vapor Transmission	ASTM E96	2.0 - 5.0 perm-in.
Water Absorption	ASTM C272	less than 4.0
Coefficient of Linear Expansion	ASTM D696	0.000035 in/in°F
Dimensional Stability	ASTM D2126	max. 2%

ASTM Specifications: Loadmaster Expanded Polystyrene thermal insulation complies with ASTM specification C 578 Type 1.

Packaging and Storage: Loadmaster Expanded Polystyrene thermal insulation is packaged in vented plastic bags labeled with the Loadmaster trademark. Bags contain varying numbers of insulation panels, depending on thickness.

Design Limitations: Loadmaster Expanded Polystyrene thermal insulation should not be installed in roof decks assemblies where interior temperatures will be maintained at or in excess of 200 F. Additionally, Loadmaster Expanded Polystyrene thermal insulation cannot be exposed to coal tar pitch, cold process, fluid applied coatings or other aliphatic or aromatic compounds. When used in assemblies with built-up roof coverings, the top layer Duraflex Mineral Board thickness shall be 5/8 in.

Thermal Properties: A complete listing of thermal insulation values can be found in the Loadmaster Sales Brochure.

R-Values

Thickness	Summer R-Value	Winter R-Value
1.0"	6.49	6.22
1.5"	8.72	8.14
2.0"	10.95	10.06
2.5"	13.18	11.99
3.0"	15.41	13.91
3.5"	17.63	15.83
4.0"	20.00	17.76

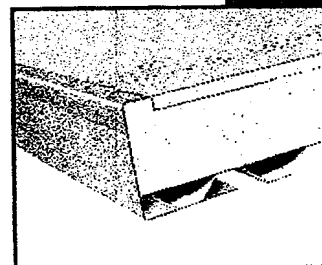
R-values based upon Loadmaster Basic Assembly with one layer of 1/2" Duraflex Mineral Board.



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EPS - Expanded Polystyrene

COMPONENT 4: DURAFLEX MINERAL BOARD & ATTACHMENT PATTERN:**PRODUCT DESCRIPTION:**

This component consists of either one layer or two layers of 1/2" or 5/8" thick Loadmaster Duraflex mineral board. The Duraflex mineral board is attached with a combination of #12 Loadmaster bugle-head board screws and Loadmaster compression discs. The screws shall be long enough to penetrate the structural deck below by 5/8 inch minimum.

BASIS OF EVALUATION:

FBC 1504.3.1 using UL 1897-04 test reports (See UL 1897-15 Equivalency Letter)

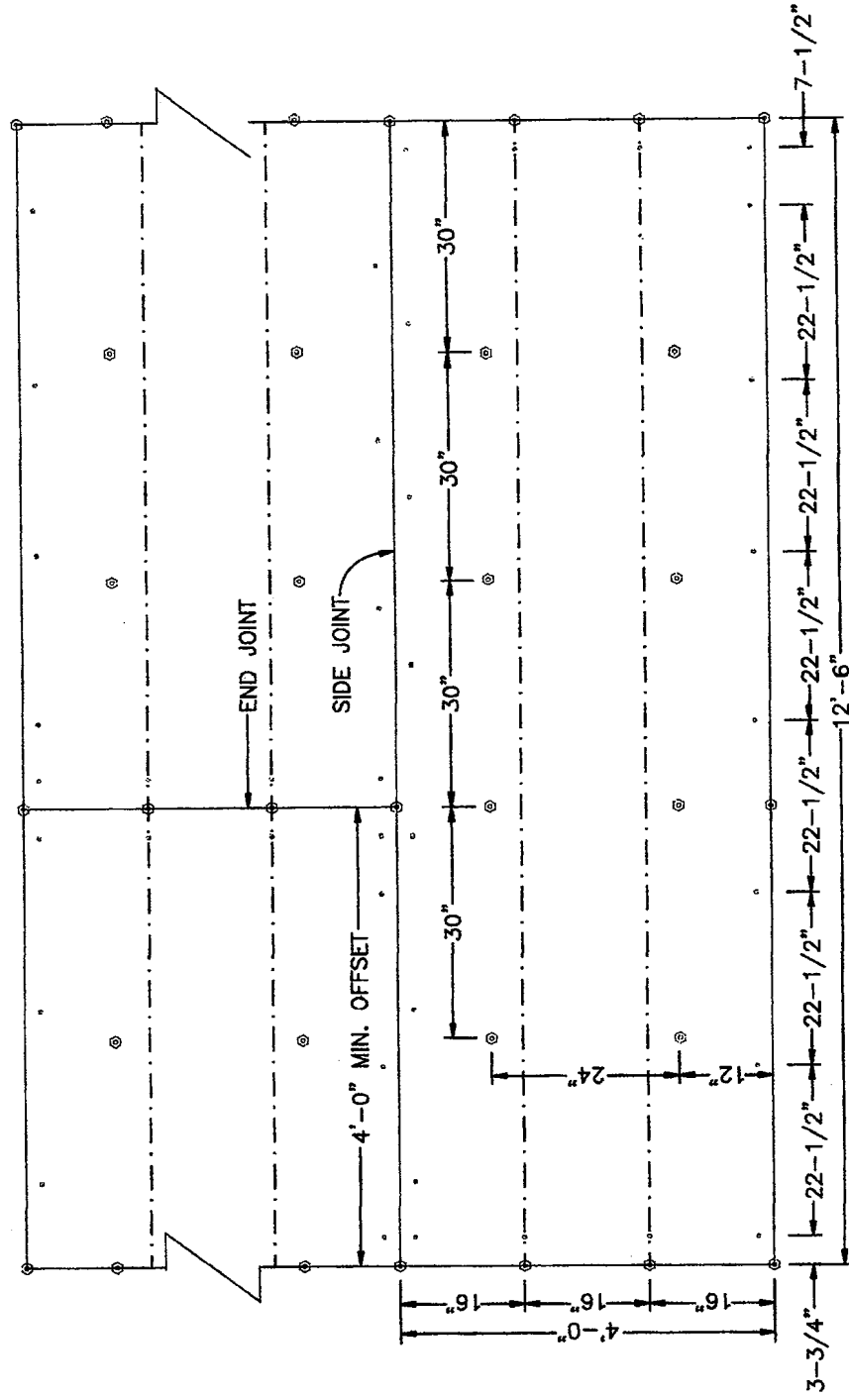
LIMITATIONS AND CONDITIONS USE:

1. This compliance is not for use in High Velocity Hurricane Zones (HVHZ).
2. Allowable load is 52.5 psf using attachment pattern #6D-34 to a minimum 22-GA steel deck and $f_y = 80$ ksi.
3. Allowable load is 60 psf using attachment pattern #6D-41 to a minimum 25-GA steel deck and $f_y = 80$ ksi.
4. Allowable uplift pressure is 82.5 psf using attachment pattern #6D-41. Attach to steel deck with minimum 25-GA thickness and $f_y = 80$ ksi. This uplift is only achievable if a hot mopped asphalt built-up roof system (BUR) with Florida product approval is installed over the Loadmaster Duraflex mineral board.
5. A roof covering with Florida product approval must be installed on top to cover the Duraflex mineral Board. The roof covering may be attached to the metal deck below or directly to the Loadmaster Durflex mineral Board as approved in the roof covering's Florida product approval.
6. If shingles are the applied roof covering two layers of Duraflex board shall be used.

TECHNICAL DOCUMENTION SUPPORTING COMPLIANCE STATEMENT:

1. UL 1897-04 test report number 72931.01-109-44, 72935.01-109-44, and 72930.01-109-44 in Appendix A.

REV	DESCRIPTION	DATE



FOR DESIGN ONLY
NOT FOR CONSTRUCTION

NOTE: SCREWS ARE
STAGGERED ACROSS SIDE
JOINTS AND ALL JOINTS
ARE TAPED.

⊙ = COMPRESSION DISC
• = SCREW FASTENER

AREA NAME:

**LOADMASTER
SYSTEMS, INC.**

LOADMASTER BOARD ATTACHMENT PATTERN
6D-34



SCALE: NOT TO SCALE | DRAWING NAME / COMPUDESIGN#:

DATE:

REV	DESCRIPTION	DATE

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 22936.01-109-44

Date 8-21-07 Tech JOB

FOR DESIGN ONLY

NOT FOR CONSTRUCTION

NOTE: SCREWS ARE STAGGERED ACROSS SIDE JOINTS AND ALL JOINTS ARE TAPED.

- = ROOF DECK PLATE
- = COMPRESSION DISC
- = SCREW FASTENER

LOADMASTER SYSTEMS, INC.

AREA NAME:

LOADMASTER BOARD ATTACHMENT PATTERN

6D-41

SCALE: NOT TO SCALE	DRAWING NAME / COMPUTER	DATE
---------------------	-------------------------	------

COMPONENT 5: ROOF COVERING:

27

PRODUCT DESCRIPTION:

The Loadmaster Roof Deck Assembly does not include the roof covering. The Loadmaster nailable roof deck assembly requires a roof covering that has Florida product approval. The roof covering must either be attached to the component #1 structural steel deck or to component #4, the Loadmaster Duraflex mineral board.

Loadmaster does not recommend mechanically-attached roof membranes (TPO, PVC, ETC.) or loose laid ballast membranes.

Florida product approved roof membrane coverings can be applied directly over the Duraflex mineral board (Ex: Miami-Dade NOA **22-0907.03**) with asphalt (hot or cold), or adhesives (latex or solvent-based) in accordance with roof covering manufacturer specifications.

Other roof coverings such as asphalt shingles, metal shingles, clay tile, and standing seam roof panels can also be used over the load master assembly and attached per their Florida product approval.

BASIS OF EVALUATION:

The roof covering shall have a Florida Product Approval Number compatible with use in this assembly.

LIMITATIONS AND CONDITIONS USE:

1. This compliance is not for use in High Velocity Hurricane Zones (HVHZ).
2. A roof covering attached to the structural deck, must have Florida product approval for attachment to a structural deck at least as thick as the component#1 structural deck selected for use in this assembly.
3. A roof covering attached only to the Loadmaster Duraflex board, must have Florida product approval showing that when attached to the Loadmaster Duraflex board, it exceeds the required wind pressures for the project.

TECHNICAL DOCUMENTATION SUPPORTING COMPLIANCE STATEMENT:

1. UL 1897-04 test report number 72931.01-109-44, 72935.01-109-44, and 72930.01-109-44 in Appendix A.

APPENDIX A



29

**UL 1897
TEST REPORT**

Rendered to:

LOADMASTER SYSTEMS

**SERIES/MODEL: Super Span 150 I-250 Insulated Deck Assembly
TYPE: Roof Assembly**

**Report No: 72935.01-109-44
Revision 2: 02/26/08
Test Date: 04/26/07
Report Date: 08/27/07
Expiration Date: 04/26/11**

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
fax: 717-764-4129
www.archtest.com



30

UL 1897 TEST REPORT

Rendered to:

LOADMASTER SYSTEMS
4295 D International Boulevard
Norcross, Georgia 30093

Report No: 72935.01-109-44
Revision 2: 02/26/08
Test Date: 04/26/07
Report Date: 08/27/07
Expiration Date: 04/26/11

Project Summary: Architectural Testing, Inc. was contracted by Loadmaster Systems to perform testing on a Series/Model Super Span 150 I-250 Insulated Deck Assembly, roof assembly. The test specimen area, measuring 10' square, was tested in accordance with UL 1897, *Standard for Uplift Test for Roof Covering Systems*. The purpose of this test is to evaluate the comparative resistance of roof assemblies to negative pressures. Reference Sketch #1 for indicator locations.

Test Specimen Description:

Series/Model: Super Span 150 I-250 Insulated Deck Assembly

Roof Assembly: The roof system consisted of four layers. The first layer (bottom) was Loadmaster Super Span 150 22 gauge corrugated steel deck. The Super Span 150 deck was secured to the W6 steel "I" beams with #12 x 1-1/4" long self-tapping hex head screws, located 12" on center at the perimeter and 6" on center to the "I" beams. The sidelaps of the Super Span 150 deck were secured with #12 x 3/4" long self-tapping screws, 18" on center. The second layer was 2-1/2" thick Loadmaster isocyanurate insulation. The third layer was 1/2" thick, Loadmaster Duraflex Mineral Board. The second and third layers were secured to the Super Span 150 deck with rows of #12 x 4-1/4" long Loadmaster bugle-head board screws with Loadmaster compression discs. The rows were spaced 16" on center and the screws within the rows were 6" from one end and 12" from the other end and 18" on center (reference Drawing #6D-34). The fourth (top) layer was GAF Freedom EZ (A peel and stick TPO) finish roof covering.

Test Frame Construction: The 10' 0" by 10' 0" test frame was constructed of W6 Steel "I" beams. The "I" beams were placed 2' 0" from each end, creating a 6' 0" on center condition, and were welded to the peripheral support at the ends. The frame also utilized 2" x 2" steel angle at the perimeter, welded to the test frame.

Peripheral Support: The test apparatus frame was fabricated from C15 by 33.9 steel channels, 10' 0" wide by 10' 0" long by 1' 3" deep.

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phone: 717-764-7700
fax: 717-764-4129
www.archtest.com

Test Results: The results are tabulated as follows:

General Test Note: All loads were held for a duration of 60 seconds.

<u>Pressure</u>	<u>Indicator #1</u>	<u>Indicator #2</u>	<u>Indicator #3</u>	<u>Indicator #4</u>
15.0 psf	0.03"	0.06"	0.03"	0.03"
30.0 psf	0.09"	0.09"	0.09"	0.06"
45.0 psf	0.13"	0.13"	0.16"	0.13"
60.0 psf	0.19"	0.19"	0.22"	0.19"
75.0 psf	0.22"	0.25"	0.28"	0.22"
90.0 psf	0.28"	0.31"	0.34"	0.31"
105.0 psf	0.34"	0.38"	0.41"	0.34"
120.0 psf	---	---	---	---

Note #1: On the way to 120 psf, the Loadmaster Mineral Board broke causing a failure. The Loadmaster Duraflex Mineral Board pulled over the top of the Loadmaster compression discs and screws. The TPO roof covering remained adhered to the Duraflex Mineral Board.

Note #2: Reference the attached Sketch #1 for location of deflection measurement devices.



Witnesses: The following representatives witnessed all or part of the testing.

<u>Name</u>	<u>Company</u>
Darden Cobb	Loadmaster Systems
Michael D. Stremmel, P.E.	Architectural Testing, Inc.
Jeramie D. Grabosch	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

Results obtained are tested values and were secured by using the designated test methods. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.

Digitally Signed for: Jeramie Grabosch by Vicki L. McElwain

Jeramie D. Grabosch
Senior Technician

Digitally Signed by: Michael D. Stremmel

Michael D. Stremmel, P.E.
Senior Project Engineer

JDG:vlm/dem

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Sketch (1)

Appendix-B: Drawings (4)



**UL 1897
TEST REPORT**

Rendered to:

LOADMASTER SYSTEMS

**SERIES/MODEL: Heavy Duty Basic Roof Deck
TYPE: Roof Assembly**

**Report No: 72930.01-109-44
Revision 2: 02/26/08
Test Date: 04/27/07
Report Date: 08/27/07
Expiration Date: 04/27/11**

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
fax: 717-764-4129
www.archtest.com



Architectural Testing

UL 1897 TEST REPORT

Rendered to:

LOADMASTER SYSTEMS
4295 D International Boulevard
Norcross, Georgia 30093

Report No: 72930.01-109-44
Revision 2: 02/26/08
Test Date: 04/27/07
Report Date: 08/27/07
Expiration Date: 04/27/11

Project Summary: Architectural Testing, Inc. was contracted by Loadmaster Systems to perform testing on a Series/Model Heavy Duty Basic Roof Deck assembly. The test specimen area, measuring 10' square, was tested in accordance with UL 1897, *Standard for Uplift Test for Roof Covering Systems*. The purpose of this test is to evaluate the comparative resistance of roof assemblies to negative pressures. Reference Sketch #1 for indicator locations.

Test Specimen Description:

Series/Model: Heavy Duty Basic Roof Deck Assembly

Roof Assembly: The roof system consisted of three layers. The first layer (bottom) was a 25 gauge corrugated steel Heavy Duty deck. The Heavy Duty deck was secured to the W6 steel "I" beams with #12 x 1-1/4" long self-tapping hex head screws, 7-1/2" on center at the deck ends and along steel "I" beams. The perimeter flutes were secured to the steel angle framing at 12" on center with #12 x 1-1/4" long self-tapping hex head screws. The sidelaps of the Heavy Duty deck were secured at 12" on center with #12 x 3/4" long self-tapping hex head screws. The second layer (middle) was 1/2" thick, Loadmaster Duraflex Mineral Board, and it was secured to the Heavy Duty deck with rows of #12 x 1-1/2" long Loadmaster bugle-head board screws with Loadmaster compression discs. The rows were spaced 16" on center and the screws within the rows were 3-3/4" from each end and spaced 15" on center (reference Drawing #6D-41). The third (top) layer was Loadmaster Duraclad Roofing Underlayment and was self-adhered to the Duraflex Mineral Board.

Test Frame Construction: The 10' 0" by 10' 0" test frame was constructed of W6 Steel "I" beams. The "I" beams were placed 3' 0" from each end, creating a 4' 0" on center condition, and were welded to the peripheral support at the ends. The frame also utilized 2" x 2" steel angle at the perimeter, welded to the test frame.

Peripheral Support: The test apparatus frame was fabricated from C15 by 33.9 steel channels, 10' 0" wide by 10' 0" long by 1' 3" deep.

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fax: 717-764-4129
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Test Results: The results are tabulated as follows:

General Test Note: All loads were held for a duration of 60 seconds.

<u>Pressure</u>	<u>Indicator #1</u>	<u>Indicator #2</u>	<u>Indicator #3</u>
15.0 psf	0.03"	0.03"	<0.01"
30.0 psf	<0.01"	0.09"	0.06"
45.0 psf	0.03"	0.19"	0.13"
60.0 psf	0.09"	0.22"	0.19"
75.0 psf	0.13"	0.28"	0.25"
90.0 psf	0.19"	0.34"	0.31"
105.0 psf	0.22"	0.47"	0.38"
120.0 psf	0.28"	0.53"	0.44"
135.0 psf	---	---	---

Note #1: On the way to 135 psf, the Loadmaster Mineral Board broke, causing a failure. The Loadmaster Duraflex Mineral Board pulled over the top of the Loadmaster compression discs and screws. The duraclad underlayment remained adhered to the Duraflex Mineral Board.

Note #2: Reference the attached Sketch #1 for location of deflection measurement devices.



Witnesses: The following representatives witnessed all or part of the testing.

<u>Name</u>	<u>Company</u>
Darden Cobb	Loadmaster Systems
Michael D. Stremmel, P.E.	Architectural Testing, Inc.
Jeramie D. Grabosch	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

Results obtained are tested values and were secured by using the designated test methods. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC.

Digitally Signed for: Jeramie Grabosch by Vicki L. McElwain

Jeramie D. Grabosch
Senior Technician

Digitally Signed by: Michael D. Stremmel

Michael D. Stremmel, P.E.
Senior Project Engineer

JDG:vlm/dem

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix-A: Sketch (1)
Appendix-B: Drawings (3)

REV	DESCRIPTION	DATE

LOADMASTER DURACLAD ROOFING UNDERLAYMENT

LOADMASTER DURAFLEX MINERAL BOARD

LOADMASTER HEAVY DUTY (25 GA.) STEEL SECTION

LOADMASTER SCREW FASTENER

0.5" 0.94" 1.6"

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 22930.01-109-44

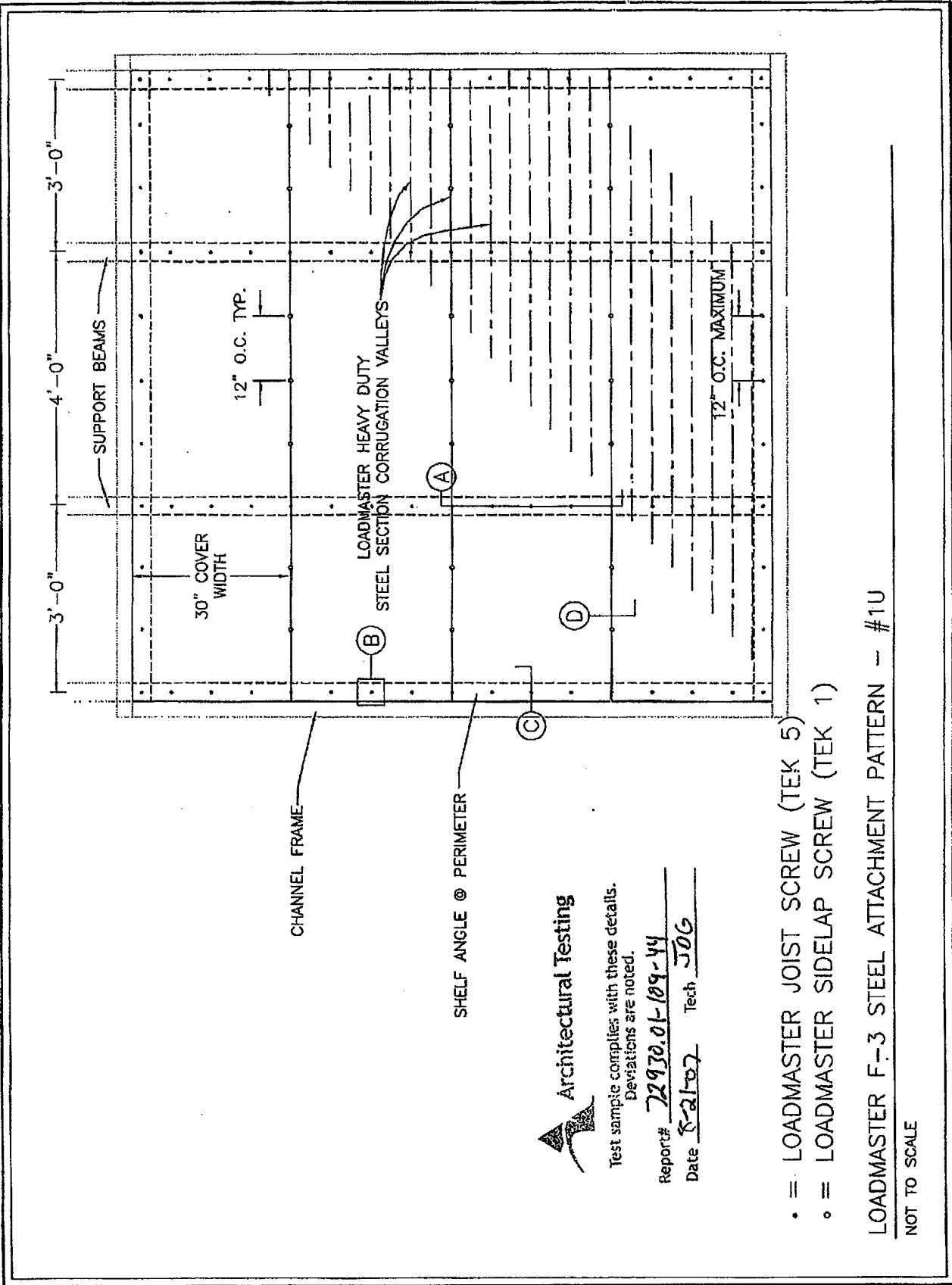
Date 8-21-07 Tech Jag

LOADMASTER SYSTEMS, INC.

AREA NAME: UPLIFT TESTING - ASSEMBLY 1U

LOADMASTER HEAVY DUTY BASIC ROOF DECK ASSEMBLY

SCALE: NOT TO SCALE DRAWING NAME / COMPLETION# DATE



Test sample complies with these details.
Deviations are noted.

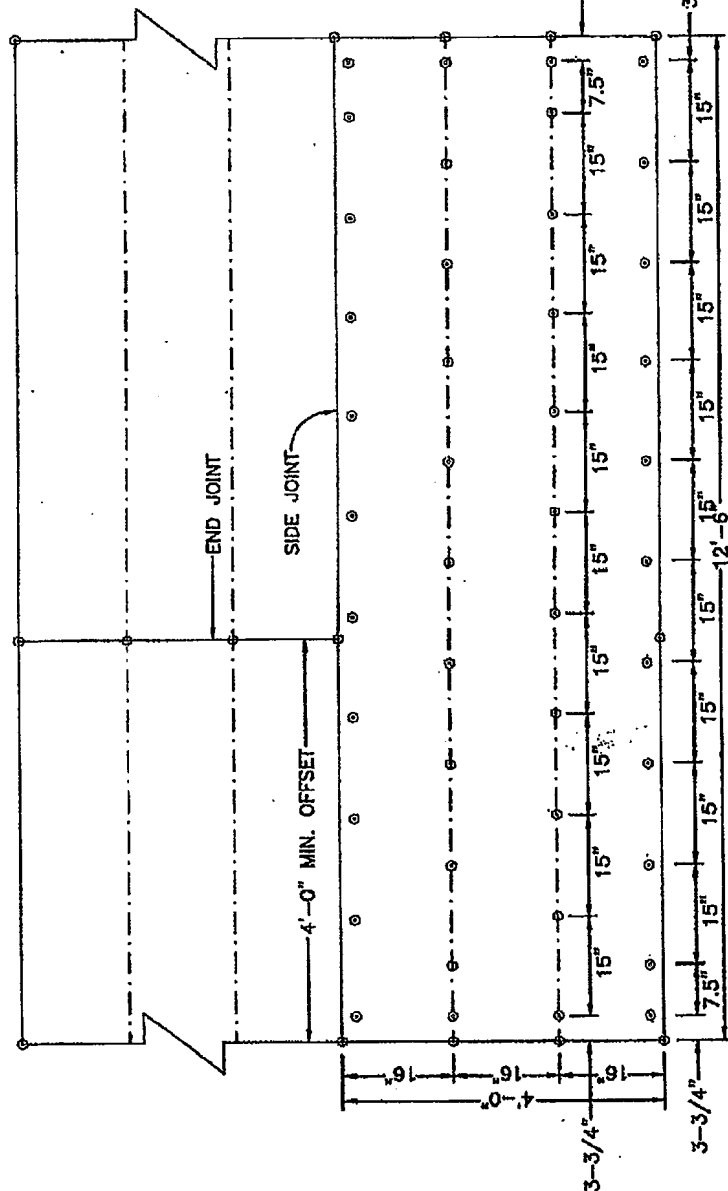
Report# 72930.01-109-44
Date 8-21-07 Tech JOG

- = LOADMASTER JOIST SCREW (TEK 5)
- = LOADMASTER SIDELAP SCREW (TEK 1)

LOADMASTER F-3 STEEL ATTACHMENT PATTERN - #1U

NOT TO SCALE

REV	DESCRIPTION	DATE



 Architectural Testing
Test sample complies with these details.
Deviations are noted.
Report # 22980.01-109-44
Date 8-21-07 Tech JOG

FOR DESIGN ONLY
NOT FOR CONSTRUCTION

94 Screws/so.
@ = ROOF DECK PLATE
o = COMPRESSION DISC
• = SCREW FASTENER

NOTE: SCREWS ARE
STAGGERED ACROSS SIDE
JOINTS AND ALL JOINTS
ARE TAPED.

 LOADMASTER SYSTEMS, INC.	AREA NAME:	LOADMASTER BOARD ATTACHMENT PATTERN
	SCALE: NOT TO SCALE	DRAWING NAME / COMPUTER FILE: 6D-41
DATE:		

40



**UL 1897
TEST REPORT**

Rendered to:

LOADMASTER SYSTEMS

**SERIES/MODEL: Loadmaster Heavy Duty I-250
TYPE: Insulated Roof Assembly**

**Report No: 72931.01-109-44
Test Date: 05/02/07
Report Date: 02/19/08
Expiration Date: 05/02/11**

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
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www.archtest.com



41

UL 1897 TEST REPORT

Rendered to:

LOADMASTER SYSTEMS
4295 D International Boulevard
Norcross, Georgia 30093

Report No: 72931.01-109-44

Test Date: 05/02/07

Report Date: 02/19/08

Expiration Date: 05/02/11

Project Summary: Architectural Testing, Inc. was contracted by Loadmaster Systems to perform testing on a Series/Model Loadmaster Heavy Duty I-250, insulated roof assembly. The test specimen area, measuring 10' square, was tested in accordance with UL 1897, *Standard for Uplift Test for Roof Covering Systems*. The purpose of this test is to evaluate the comparative resistance of roof assemblies to negative pressures. Reference Sketch #1 for indicator locations.

Test Specimen Description:

Series/Model: Loadmaster Heavy Duty I-250 Insulated Roof Deck Assembly

Roof Assembly: The roof system consisted of four layers. The first layer (bottom) was a 25 gauge corrugated steel Heavy Duty deck. The Heavy Duty deck was secured to the W6 steel "I" beams with #12 x 1-1/4" long self-tapping hex head screws at 7.5" on center, 12" on center at the perimeter. The sidelaps of the Heavy Duty deck were secured with #12 x 3/4" long self-tapping screws, 15" on center. The second layer was 2-1/2" thick Loadmaster isocyanurate insulation. The third layer was 1/2" thick, Loadmaster Duraflex Mineral Board. The second and third layers were secured to the Heavy Duty deck with rows of Loadmaster #12 x 4-1/4" long self-tapping bugle-head screws with Loadmaster compression disc. The rows were spaced 16" on center and the screws within the rows were 3-3/4" from each end and 15" on center (reference Drawing #6D-41). The fourth layer was a hot mop built-up roof (BUR) covering with a mineral faced cap sheet.

Test Frame Construction: The 10' 0" by 10' 0" test frame was constructed of W6 Steel I beams. The I beams were placed 2' 6" from each end, creating a 5' 0" on center condition, and were welded to the peripheral support at the ends. The frame also utilized 2" x 2" steel angle at the perimeter, welded to the test frame.

Peripheral Support: The test apparatus frame was fabricated from C15 by 33.9 steel channels, 10' 0" wide by 10' 0" long by 1' 3" deep.

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Test Results: The results are tabulated as follows:

General Test Note: All loads were held for a duration of 60 seconds.

<u>Pressure</u>	<u>Indicator #1</u>	<u>Indicator #2</u>	<u>Indicator #3</u>
15.0 psf	0.06"	0.06"	0.03"
30.0 psf	0.06"	0.13"	0.06"
45.0 psf	0.13"	0.22"	0.16"
60.0 psf	0.19"	0.31"	0.22"
75.0 psf	0.22"	0.41"	0.28"
90.0 psf	0.31"	0.50"	0.34"
105.0 psf	0.34"	0.59"	0.47"
120.0 psf	0.44"	0.69"	0.59"
135.0 psf	0.50"	0.78"	0.72"
150.0 psf	0.56"	0.88"	0.84"
165.0 psf	0.59"	0.94"	0.88"
180.0 psf	---	---	---

Note #1: On the way to 180 psf, the Loadmaster Duraflex Mineral Board broke, causing a failure. The Duraflex mineral board pulled over the top of the Loadmaster board screws and compression discs. The BUR covering remained adhered to the Loadmaster Duraflex mineral board.

Note #2: Reference the attached Sketch #1 for location of deflection measurement devices.

43

Witnesses: The following representatives witnessed all or part of the testing.

<u>Name</u>	<u>Company</u>
Michael D. Stremmel, P.E.	Architectural Testing, Inc.
Jeramie D. Grabosch	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

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For ARCHITECTURAL TESTING, INC.:



Digitally Signed for: Jeramie Grabosch by Vicki L. McElwain

Jeramie D. Grabosch
Supervisor - Product Testing



Digitally Signed by: Michael D. Stremmel

Michael D. Stremmel, P.E.
Senior Project Engineer

JDG:jdg/vlm

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Sketch (1)

Appendix-B: Drawings (4)

REV	DATE	DESCRIPTION	BY

The diagram illustrates a roof layout with three vertical purlins. A horizontal line with arrows at both ends is labeled 'PURLINS'. Three circular indicators are positioned along the central purlin, labeled '#1', '#2', and '#3' from left to right. The entire diagram is enclosed in a rectangular frame.

INDICATOR LOCATIONS

PROJECT NO. 72931.01 109-44	PROJECT NAME UL 580, Heavy Duty I-250 CLIENT: Loadmaster Systems	 Architectural Testing	DRAWING	Sketch 1 (Indicators)	DWG. BY: TM DATE: 2/15/08	SHEET 1 OF 1
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REV	DESCRIPTION	DATE

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 22936.01-109-44

Date 8-21-07 Tech JGG

FOR DESIGN ONLY

NOT FOR CONSTRUCTION

94 Screws

74 Screws

NOTE: SCREWS ARE STAGGERED ACROSS SIDE JOINTS AND ALL JOINTS ARE TAPED.

FOR DESIGN ONLY

NOT FOR CONSTRUCTION

LEGEND:

- ☐ = ROOF DECK PLATE
- = COMPRESSION DISC
- = SCREW FASTENER

74 Screws

LOADMASTER SYSTEMS, INC.

AREA NAME:

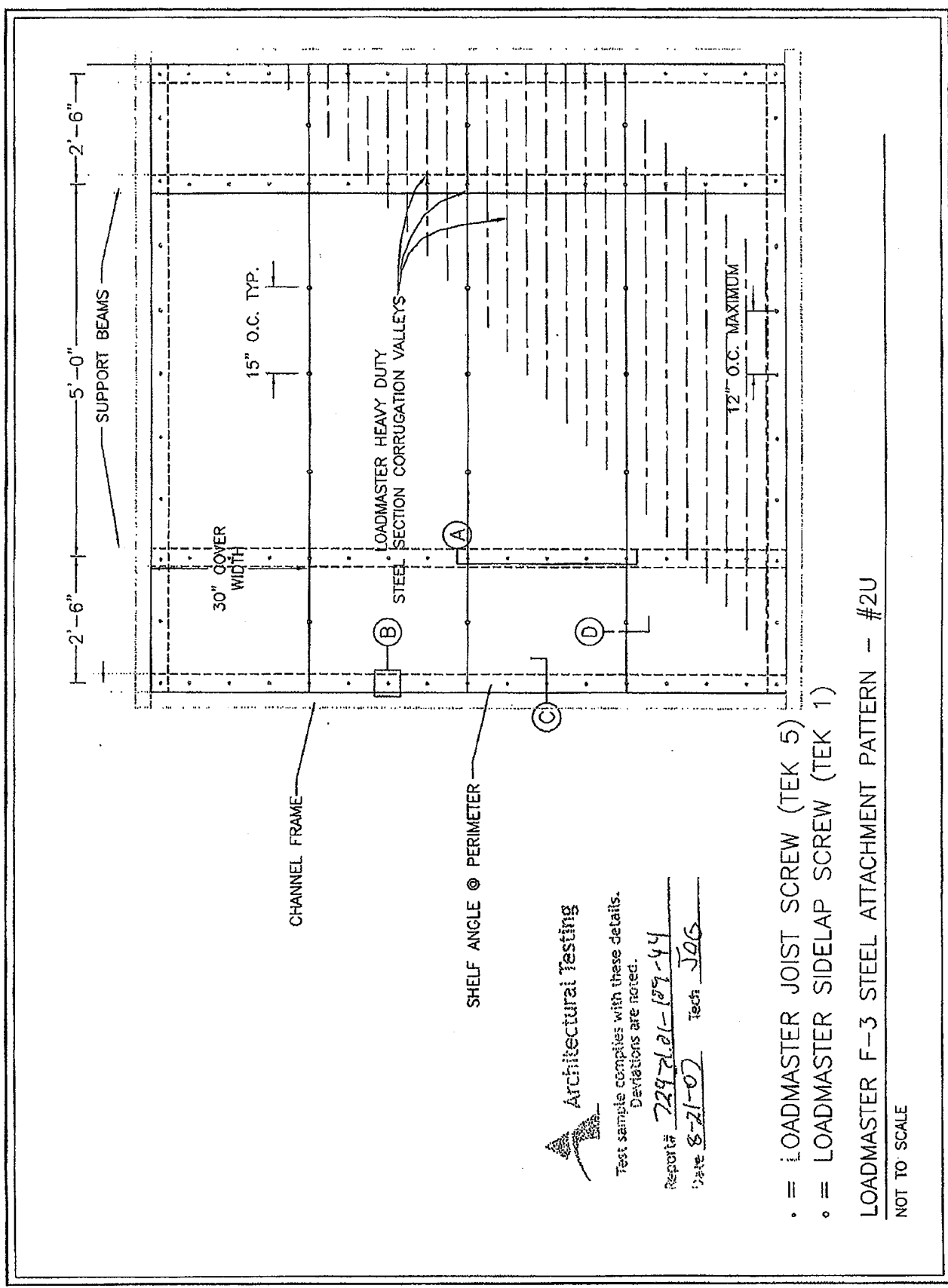
LOADMASTER BOARD ATTACHMENT PATTERN

6D-41

SCALE: NOT TO SCALE

DRAWING NAME / COMPLETION#

DATE

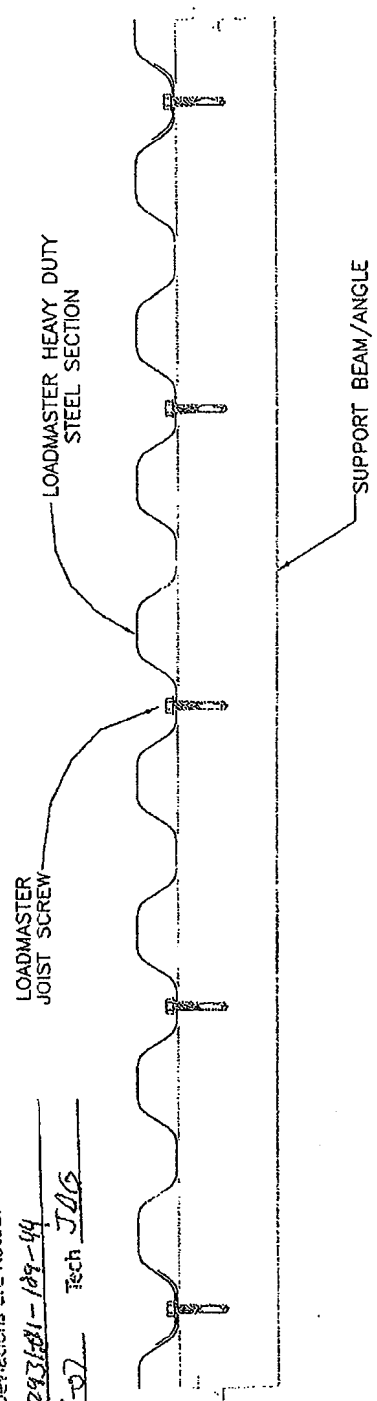




Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 7293181-189-64
Date 8-21-07 Tech JAG



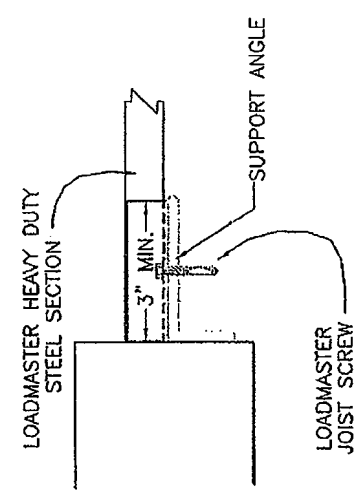
A LOADMASTER "F" STEEL ATTACHMENT PATTERN

NOT TO SCALE



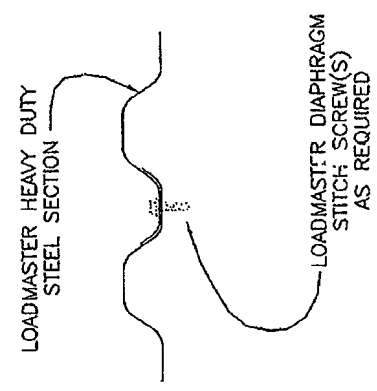
B LOADMASTER JOIST SCREW

NOT TO SCALE



C END LAP

NOT TO SCALE



D SIDE LAP

NOT TO SCALE

REV	DESCRIPTION	DATE

BUILT-UP ROOFING

LOADMASTER DURAFLEX
MINERAL BOARD

LOADMASTER HEAVY DUTY (25 GA.)
STEEL SECTION

LOADMASTER
ISOCYANURATE INSULATION

LOADMASTER
SCREW FASTENER

LOADMASTER SYSTEMS, INC.

AREA NAME: UPLIFT TESTING - ASSEMBLY 2U

LOADMASTER HEAVY DUTY I-250
INSULATED ROOF DECK ASSEMBLY

Architectural Testing
 Test sample complies with these details.
 Deviations are noted.
 Report# 72931.01-105-44
 Date 8-21-07 Tech JOS

December 15, 2023

Mr. Archie Nelson
Loadmaster Systems
3100E Northwoods Place
Peachtree Corners, GA 30071

Re: UL-1897 Equivalency (72930.01, 72931.01, and 72934.01)

Dear Mr. Nelson,

Pursuant to your request, Intertek reviewed test reports 72930.01, 72931.01, and 72931.01 to determine equivalence of the original test standard utilized to the current UL-1897 (2015) test standard adopted in the 2023 Florida Building Code.

- 72930.01-109-44-r2 – UL 1897 Heavy Duty Basic Roof Deck Assembly, 10' x 10', 8/27/07
- 72931.01-109-44-r0 – UL 1897 Heavy Duty I-250 Insulated Roof Deck Assembly, 10' x 10', 2/19/08
- 72935.01-109-44-r2 – UL 1897 Super Span 150 I-250 Insulated Deck Assembly, 10' x 10', 8/27/07

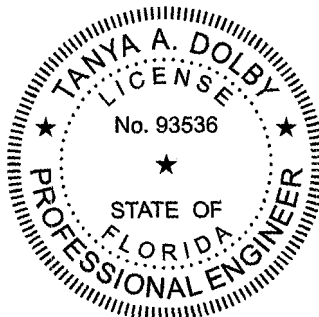
Inspection of the test reports shows the test sizes and test methods in the test reports are equivalent to those in the current UL-1897 (2015) for the 10' x 10' test size.

Yours sincerely,



Digitally Signed by: Tanya Dolby

Tanya Dolby, P.E.
Manager -- Engineering Services
Building & Construction



2023.12.17 20:42:45 -05'00'

