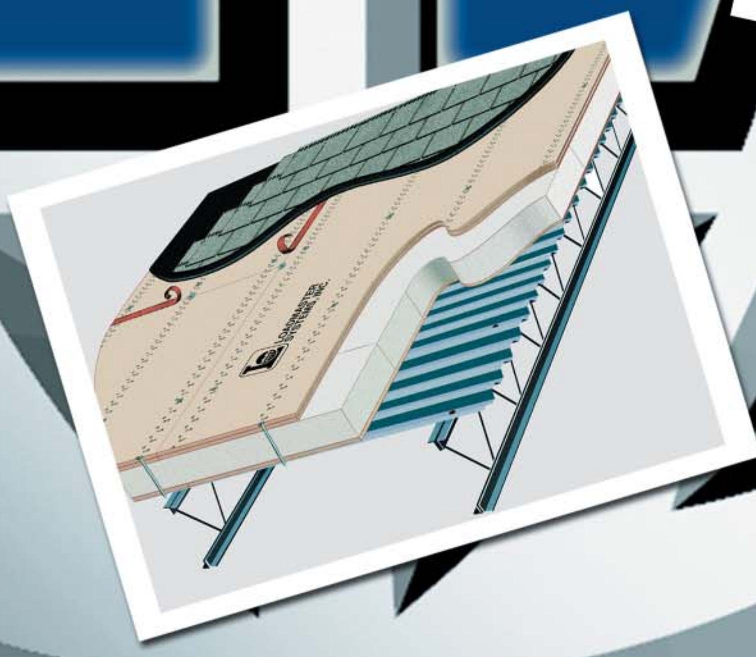


LOADMASTER
Roof Deck Systems

www.loadmaster.net

Loadmaster Roof Deck Systems tested

Grand Valley Life Science Building
Allendale, MI

Activity Center - Syracuse University

Since 1969, Loadmaster Roof Deck Systems have revolutionized the building industry with ongoing roof engineering advancements, proven performance and design versatility.

Loadmaster is a complete roof deck design, installation and warranty system. It includes high strength steel deck, thermal insulation and the unique Duraflex Mineral Board mechanically anchored to the steel deck section to provide composite action that can dramatically increase the performance of the roof covering.

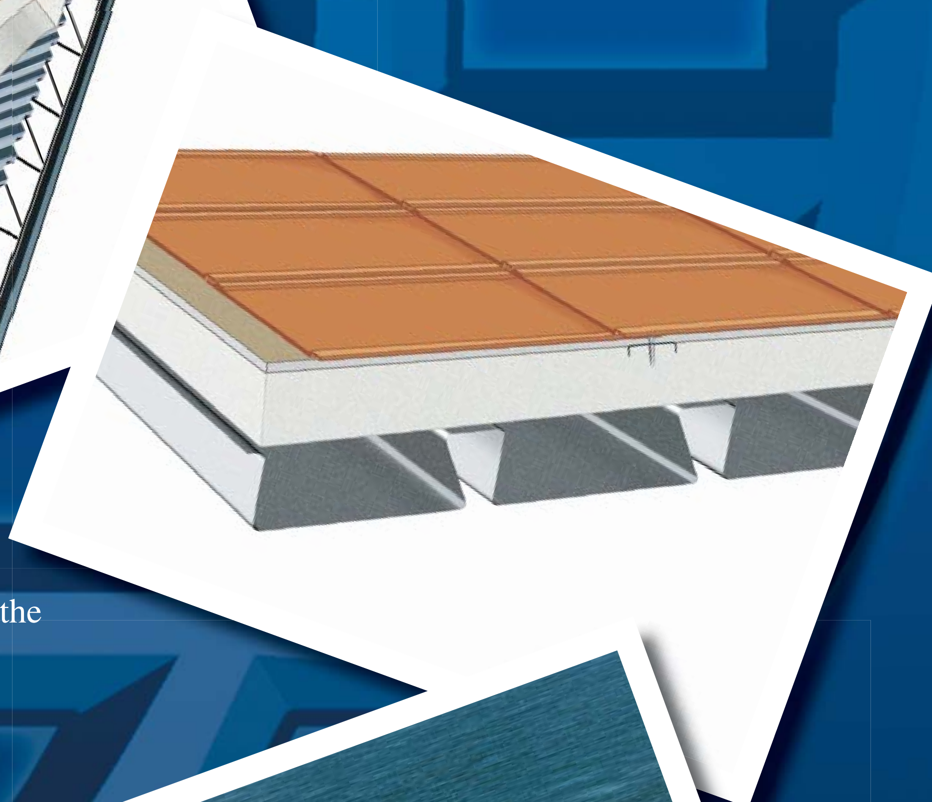
The patented Loadmaster Terminator System eliminates wood blocking at the deck terminations and transitions while stabilizing these areas that are so critical to the performance of the roof covering. Loadmaster Roof Deck assemblies have been fully tested and qualified by FM, UL and all major code organizations for both wind uplift, non-combustibility and fire resistance. These qualifications are listed in our Qualification Guide.

Loadmaster, through its Total Roof Team program, has partnering arrangements with key roof covering and structural support manufacturers. This allows the Total Roof Team to provide a complete design, installation and warranty system for the entire roof including the support structure, deck and roof covering - everything above the wall!

At the beginning of a project, Loadmaster offers its free CompuDesign service to assist designers. A bound or e-mailed design proposal arrives in 48 hours after receipt of the architect's data input. It includes drawings, details and specifications that are "bid ready".

Upon request, design proposals and project submittals are reviewed and sealed by structural

and proven for over 40 years!

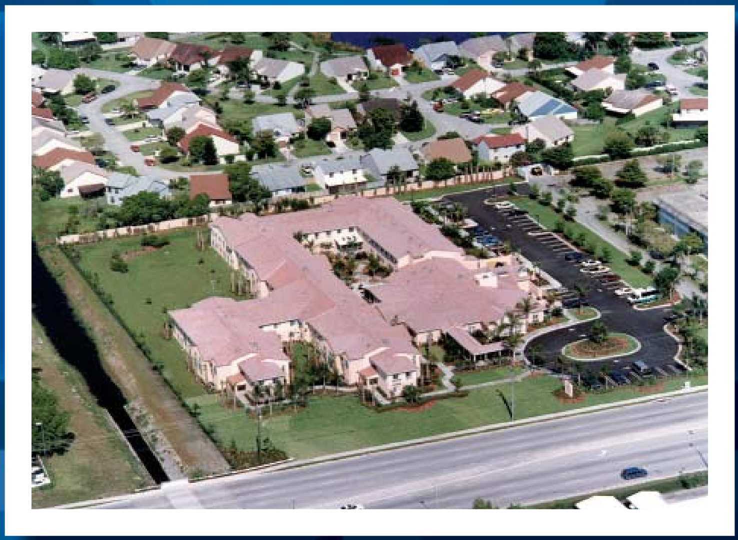


engineers licensed in the state in which the project is located. This assures system compliance with project specifications and building codes.

Licensed, trained and financially responsible contractors compete for the project and complete the installation. After installation, performance warranties are issued assuring the system will perform on the building as specified.

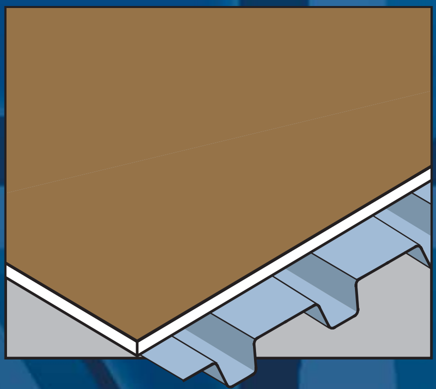
Casino Rouge - Baton Rouge, LA

Brighton Gardens-Boynton Beach, FL

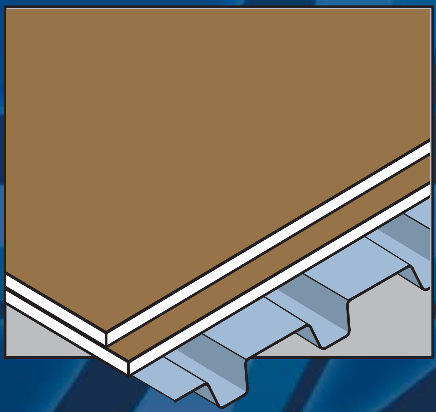


Mendenhall Labs-Ohio State University

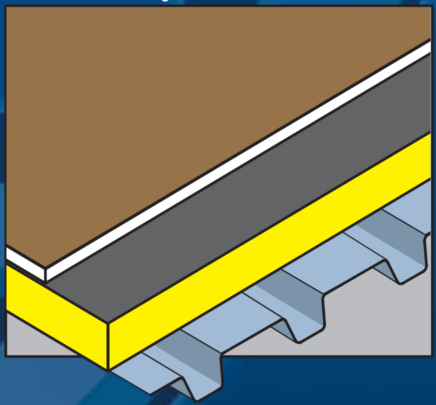
Basic Assembly



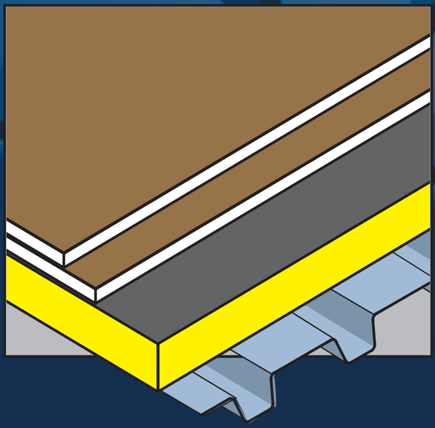
Basic Nailable Assembly



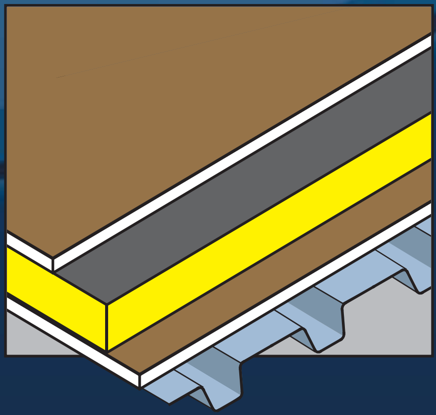
Insulated Assembly



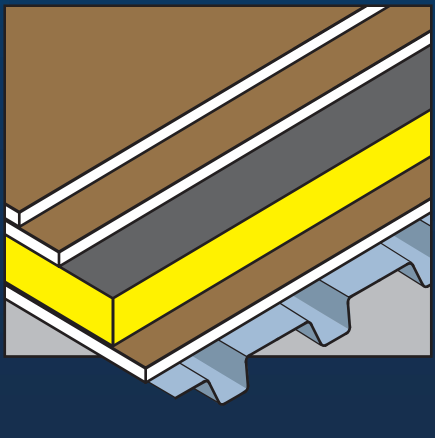
Insulated Nailable Assembly



Dual Board Insulated Assembly



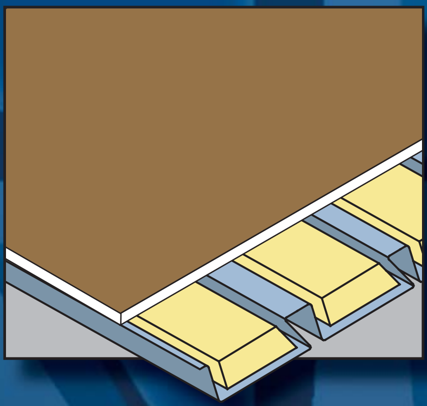
Dual Board Nailable Insulated Assembly



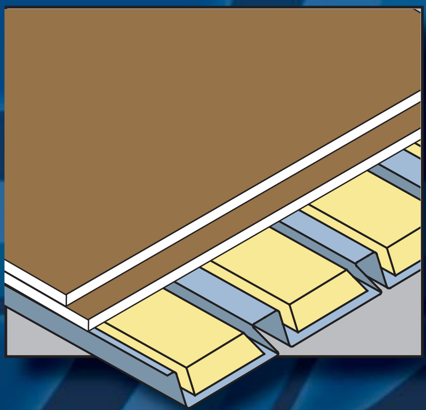
American Airlines - Ft. Worth, TX

Lake Superior State Univ. - Michigan

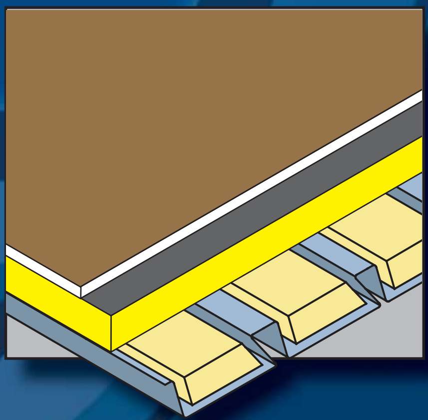
Acoustical Basic Assembly



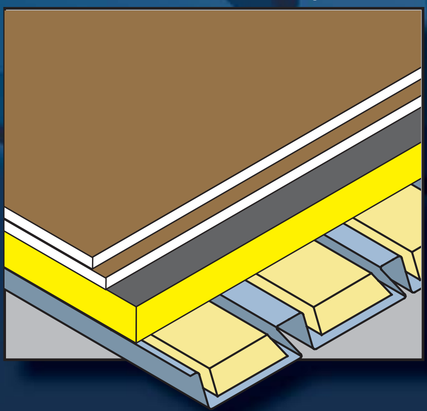
Acoustical Nailable Assembly



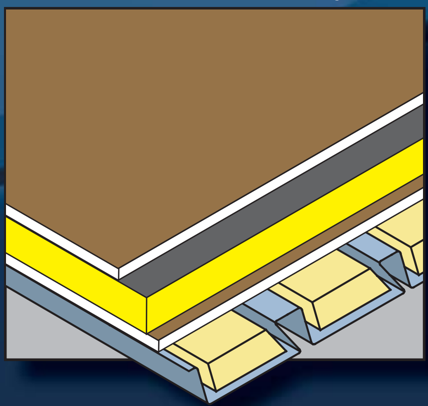
Acoustical Insulated Assembly



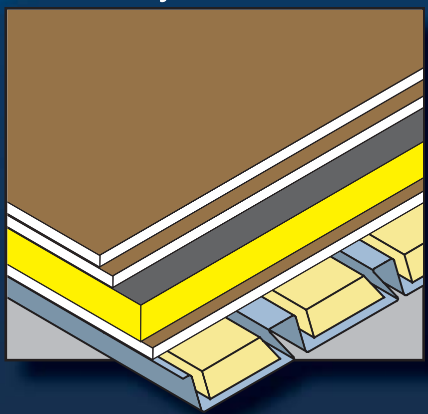
Acoustical Insulated Nailable Assembly



Acoustical Dual Board Insulated Assembly



Acoustical Dual Board Nailable Insulated Assembly



Over Forty Years of System Development

Construction System
Loadmaster is a roof deck construction system, integrally engineered for today's building industry. Over forty years of engineering advancement has been developed from meeting every building design challenge.

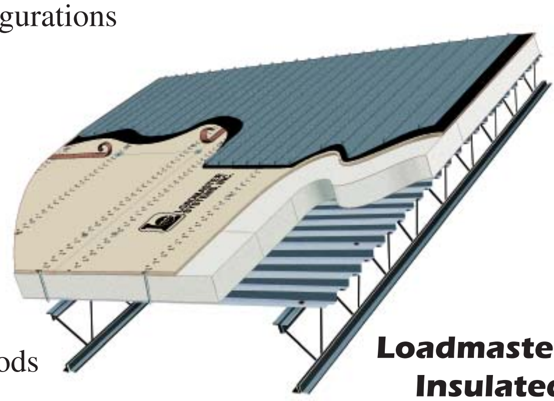
Composite Engineering
Each Loadmaster Assembly is engineered, not only for the unique needs of each building design, but to develop composite structural performance among the components.

System Components
The flexible interface of over 100 components delivers well in excess of 5000 possible assemblies. Each component is engineered and designed for compatibility and complementary structural performance.

92 Steel Deck Section Options
6 Deck Attachment Methods
3 Types of Insulation
2 Joint Tape Options
3 Joist Screw Options
2 Duraflex Mineral Board Thicknesses
25 Duraflex Attachment Configurations
1 Compression Disc
1 Roof Deck Plate
1 Diaphragm Stitch Screw
1 Terminator System
1 Duratrax System
2 Duraclad Membranes
1 Duraperm Membrane
1 Sound Dampening System
3 Duraflex Attachment Methods

Twelve Configurations
The Loadmaster system has twelve assembly configurations derived from three original structures, with each having four options. The three structures are "Basic" (Duraflex Mineral Board affixed directly to steel), "Insulated" (Duraflex Mineral Board and insulation affixed to steel - shown below) and "Dual Board" (Duraflex Mineral Board top and bottom of insulation and affixed to steel). Each of these structures can be nailable, acoustical or nailable/acoustical.

Over 5000 Assemblies
Over 5000 different assembly combinations are available within the possibilities developed from the component choices and the twelve assembly configurations. These will meet virtually all types of building designs, all model building code requirements and will function as a substrate for all types of roof covering.



Loadmaster Insulated Assembly

Finest Quality Components

Duraflex Mineral Board
At the heart of Loadmaster's superior performance is the unique Duraflex Mineral Board, manufactured to perform as an ideal substrate for virtually all types of roof covering.

- Durable high density core
- Dimensionally stable
- 400 PSI compressive strength
- Inorganic composition
- Fire resistant
- Moisture resistant
- Permeable (Perm rating: 16 min.)
- Fiberglass reinforced flexibility
- UL Listed
- Compatible with all types of roof covering
- Factory Mutual approved

High Performance Steel
Loadmaster steel sections are engineered to provide the best cost/performance value and are manufactured to the industry's highest standards.

- 80,000 to 33,000 psi ultimate yield
- Polyester prime coat painted, galvanized or both
- Domestically manufactured
- Precise quality control
- Meets Steel Deck Institute and AISI design criteria

High Performance Insulation
Foam plastic insulations that resist moisture damage are used because of proven thermal, structural and fire resistant characteristics.

- Polyisocyanurate Foam
- Expanded Polystyrene Foam
- Sound Absorbing Insulation

Professional Installation

Pre-qualified, licensed, factory-trained and financially responsible contractors install Loadmaster assemblies and warrant the quality of their work. Loadmaster's unique performance warranty covers both labor and material.

Steel deck sections are positioned over structural supports and anchored in place with welded connections through special weld washers or with Loadmaster approved mechanical fasteners.

Insulation, available in a variety of types and thicknesses, is placed over the steel sections.

High density tongue-and-groove Duraflex Mineral Board panels are placed over the insulation or directly on the steel section.

Specially designed, corrosion resistant screw fasteners anchor the insulation and Duraflex Mineral Board to the steel sections, thereby developing composite strength and stability for the roofing foundation.

Corrosion resistant compression discs provide concentrated load deflection continuity at all abutting Duraflex Mineral Board locations.

Pressure sensitive weather resistant tape is applied over all Duraflex Mineral Board joints to provide a continuous plane across the joints of the roof covering foundation. With the application of joint tape, the Loadmaster Roof Deck assembly is complete and ready to receive a variety of roof coverings.

System Qualifications and Approvals

- Classified for use with Roof-Ceiling Fire Resistance Designs, 1, 1-1/2, 2 and 3 hours.
- Classified as non-combustible roof deck/roof covering substrate for use with any UL Classified A, B or C roof covering system.
- Classified by UL as an approved nailable substrate for asphalt shingles attached with ES Hardened Do-All Loc-Nails per UL 997 test procedure.
- Classified for use when UL Class 60 or UL Class 90 wind uplift resistance is required.
- Classified for use when UL Class 90 wind uplift resistance with standing seam metal roofing is required.
- Approved for use up to FM I-150 wind uplift resistance.
- Complies with International Building Code.
- Loadmaster roof deck assemblies meet the structural diaphragm design specifications of the Steel Deck Institute.
- Comprehensive weld studies, full-scale diaphragm tests and their evaluation were conducted by Dr. Larry Luttrell, P.E., professional consultant to the SDI and author of the Steel Deck Institute Diaphragm Design Manual.
- Miami-Dade NOA No. 07-0828.07
- Miami-Dade NOA No. 07-0820.09
- Florida Product Approvals FL5498, FL5840, FL5861, FL7230 and FL3778.
- All steel deck fasteners are evaluated and tested for combined uplift and shear loading.

Loadmaster Roof Deck Limited Warranty

Upon request, the Loadmaster Roof Deck Limited Warranty is provided at no cost for a period of ten years. Subject to its terms and conditions, the Loadmaster Roof Deck Limited Warranty offers coverage for roof covering substrate suitability, uniform total load carrying capacity, structural diaphragm performance and wind uplift resistance--**a true performance warranty**. No other roof deck assembly in the marketplace offers coverage this complete nor are the installation craftsmen proud enough to guarantee their workmanship in writing! When circumstances warrant, and at the sole option of Loadmaster, Loadmaster reserves the right to amend the term coverage of the Loadmaster Roof Deck Limited Warranty. A complete copy of the Loadmaster Roof Deck Limited Warranty can be obtained from Loadmaster.

Loadmaster will not issue the Limited Warranty on any project whose construction or operating environment is not in keeping with the Design Limitations that appear below. Simply because an Owner, Architect or Contractor requests or specifies a Loadmaster Roof Deck Limited Warranty to be furnished on a project does not obligate Loadmaster to furnish said Limited Warranty unless all requirements for issuance are met. No entity other than Loadmaster is authorized to issue any statement whatsoever regarding conditions for issuance of the Limited Warranty and if such is made, (it) will not be binding on Loadmaster.

Design Limitations

While Loadmaster Roof Decks function as a superior substrate for roofing, experience has shown that not all roofing materials or systems are suitable, compatible or desirable. Loadmaster Systems, Inc. does recommend that the following not be used over Loadmaster Roof Decks: black surfaced roof covering membranes; ballasted or mechanically anchored single-ply roof coverings; built-up roofing membranes not meeting the requirements of NBS-BSS 55 and installation recommendations of the National Roofing Contractors Association; membranes using coal tar pitch, asbestos felt, cold process or fluid-applied coatings.

Additionally, Loadmaster Roof Decks are not recommended for use where inside temperatures are maintained in excess of 200°F and/or where the inside relative humidity is constantly maintained in excess of 70%.

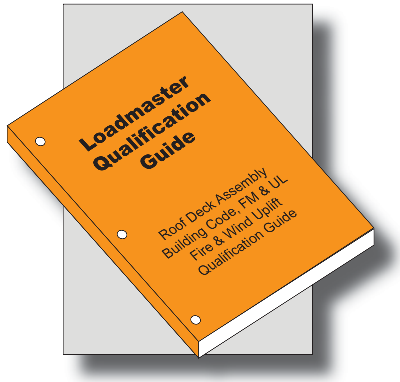
Since Loadmaster Systems, Inc. does not function as the Prime Design Professional, it is the sole responsibility of the project design professional to determine when the use of an air barrier/vapor retarder is necessary. Loadmaster Systems, Inc. provides assistance upon request.

For steel structures used where a quiet atmosphere is desired, in an effort to reduce the potential for objectionable noises, Loadmaster recommends design steps to reduce the movement of the steel deck assembly and the supporting steel structure.

System Qualification Guide

A Complete Qualification And Approval Listing

The Loadmaster Qualification Guide is extensive and it is periodically updated. Readily available from Loadmaster, this guide explains and outlines the system's FM, UL and code approvals in a simple and easily understood format eliminating much of the jargon that makes most code related documents difficult to understand and use.



Certified, Sealed & Guaranteed

Certified Designs

Loadmaster will, upon request, certify that roof deck assemblies and/or Terminator assemblies set forth in the following documents meet the particular project design requirements and the applicable building code.

- Design proposals
- Pre-bid submittals
- Project submittals

Sealed Documents

Loadmaster will, upon request, have the following documents reviewed by a structural engineer, licensed in the state in which the project is located, and sealed certifying that all roof deck and/or Terminator assemblies comply with project specifications and applicable building code requirements.

- Design proposals
- Pre-bid submittals
- Project submittals

Guaranteed Performance

Loadmaster, under its Limited Warranty, guarantees the following performance of roof deck assemblies and Terminator assemblies:

- Suitability as a roofing substrate
- Diaphragm load capacity
- Gravity load capacity
- Wind uplift resistance

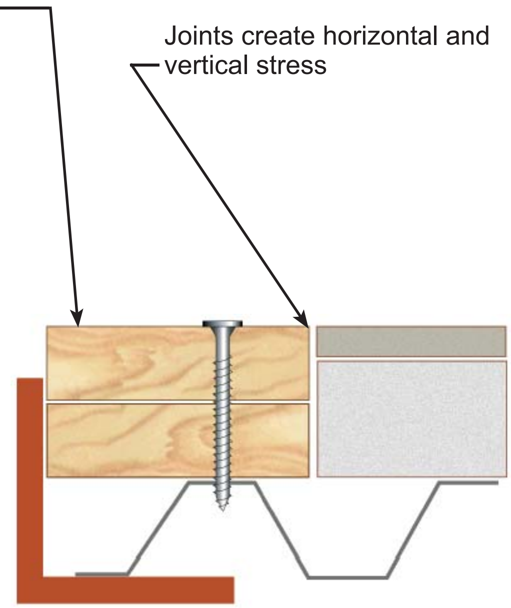
Minimum warranty term is 10 years, with certain assemblies eligible for 20 to 40 year terms. For complete information, consult the Loadmaster Technical Department.

Terminator System

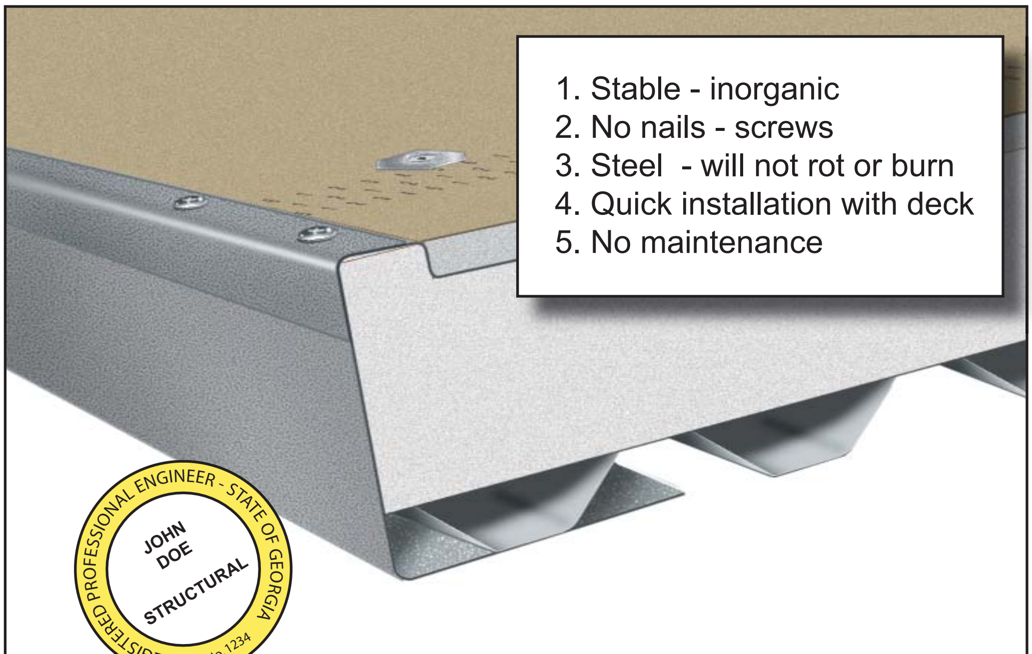
The Problem

Organic Wood Blocking

1. Unstable and warps
2. Nails back out
3. Rots & burns
4. Multiple trades install, slowing construction.
5. Costly to build and maintain



The Solution!

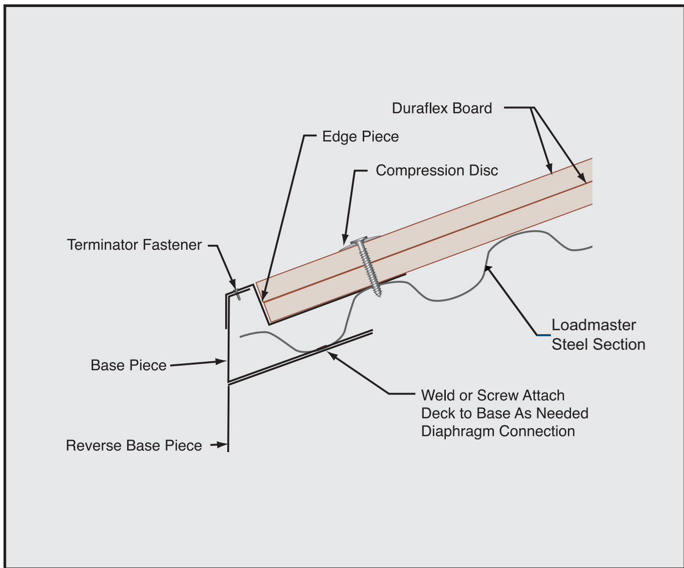


U.S. Pat. No. 6,088,992

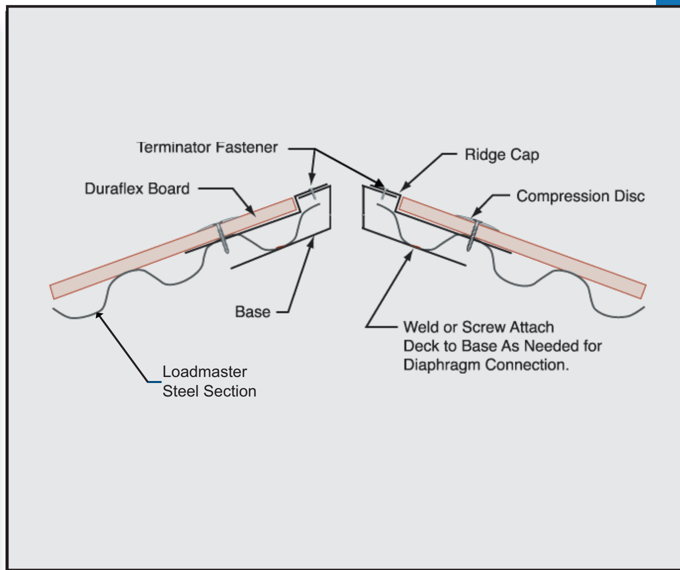
The Terminator System completely encases the edges of the roof deck with galvanized sheet steel, providing a base for attachment of fascias, gutters and roof covering, thereby eliminating the need for wood blocking and, in many cases, the edge angles. Stress imposed upon the roof covering, at joints between the roofing substrate and wood blocking, is eliminated. Composite action between the Terminator System and the deck provides the structural strength required for vertical and shear loads. The Terminator System is specifically designed and engineered for each roof deck and installed at the same time as the roof deck. This eliminates multiple trades, separate contractors and coordination problems typical of conventional wood blocking pieces.

The Terminator system, under most conditions, can be used as a shear collector to transfer shear loads to the support framing below. Consequently, some structural framing can be reduced, if not eliminated, through the use of the Terminator system.

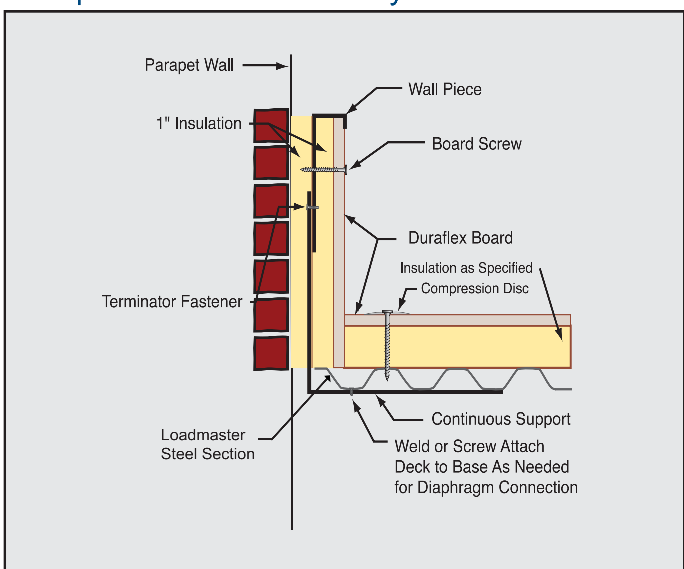
Sloped Edge Basic Nailable Assembly



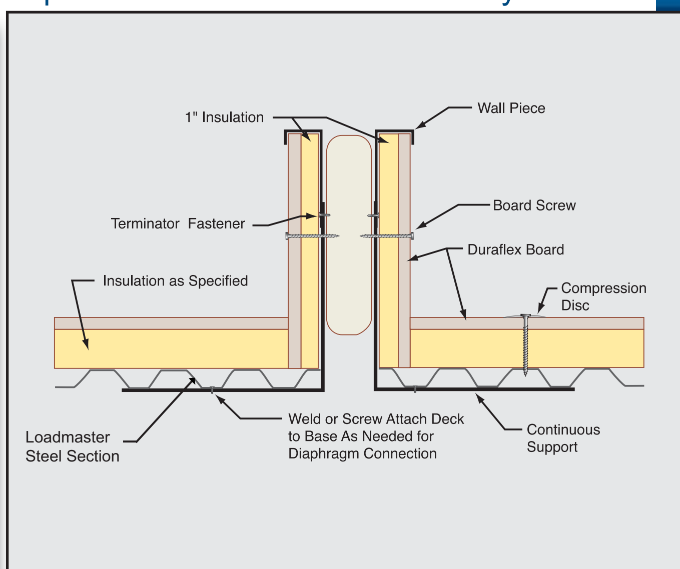
Ridge Basic Assembly



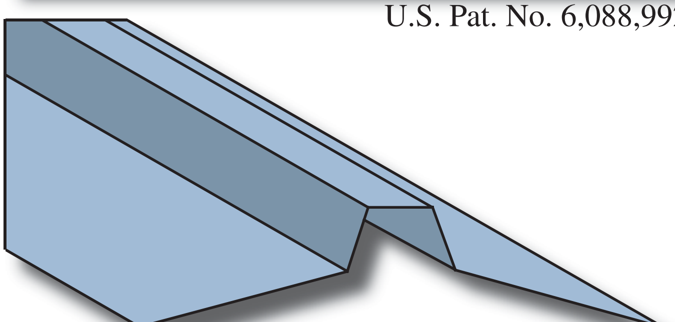
Parapet Insulated Assembly



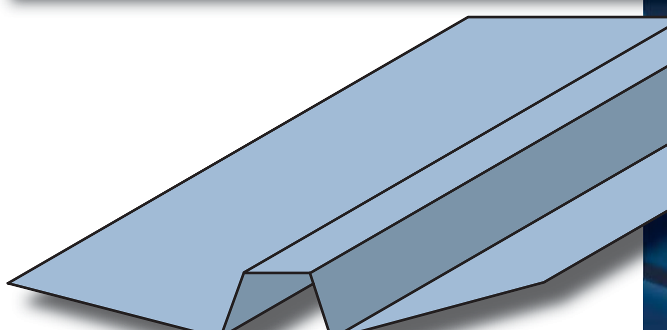
Expansion Joint Insulated Assembly



U.S. Pat. No. 6,088,992



Integra Hip/Ridge Plate



Integra Valley Plate

Steel roof deck assemblies require structural support at all valleys, hips and ridges, but break metal chevrons typically do not provide the load carrying capacity required by building codes. Loadmaster Integra Plates are engineered to carry the required wind, gravity and shear diaphragm loads to meet project design requirements. For design assistance, contact the Loadmaster Technical Department at (800) 527-4035.

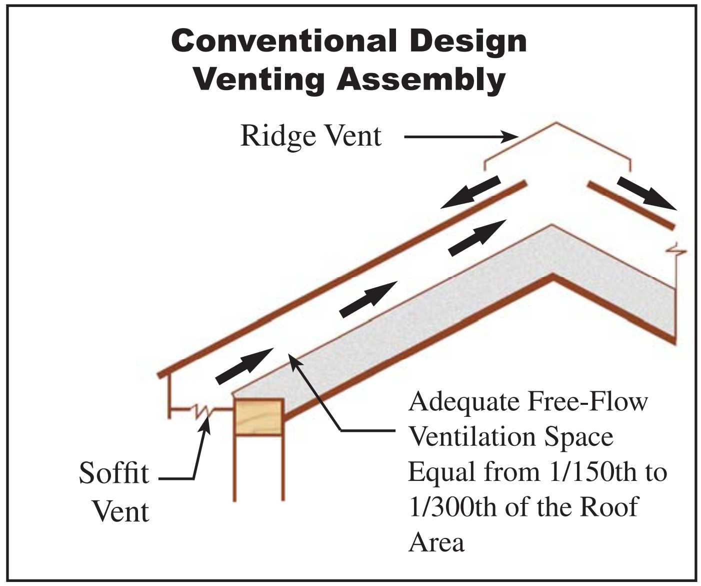
Shingle Problem

When shingles are installed over a nailable organic substrate such as plywood or OSB, changes in the moisture content of these substrates can cause them to shrink or swell & buckle or warp. This can lead to buckling or splitting of the shingles and premature shingle failure.

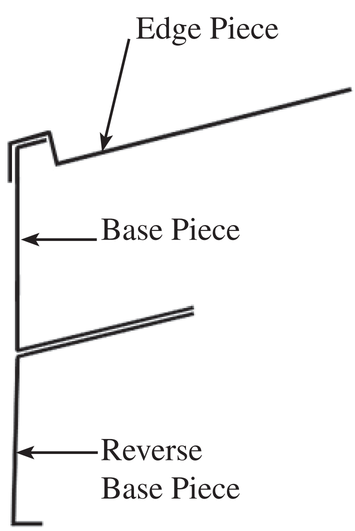
Also, when shingles are installed over insulated decks, there can be a build up of heat in the shingles that dramatically reduces shingle life.

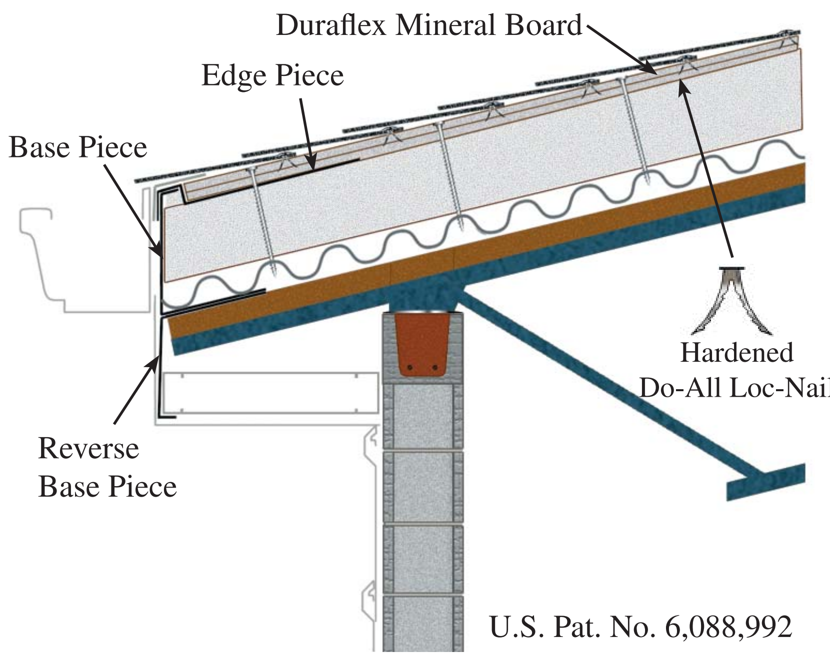
These problems have led the Asphalt Roofing Manufacturer's Association (ARMA) to issue statements recommending adequate free flow ventilation of organic substrates to carry off the heat and humidity.

Recommended minimum venting space is between 1/150th and 1/300th of the total roof area.



Shingle Solution





The Loadmaster System does not require ventilation within the assembly. Why not? The Loadmaster Duraflex Mineral Board, which forms the roofing substrate, is inorganic & contains no wood. It does not shrink, swell, buckle or split with moisture content variations like wood does. It is composed of a gypsum-based material mined from the ground and it is stable. Therefore, it does not require ventilation. Due to its high density, Duraflex Mineral Board acts as a heat sink and absorbs and releases heat at a slower rate than wood. This reduces substrate movement that causes stress in roof coverings. The result is that roof coverings last longer and require less maintenance.

Note: Depending upon the roof design, attic spaces below the Loadmaster Roof Deck assembly may require ventilation. Please consult local building code for requirements.

Noise Dampening System

Loadmaster's Noise Dampening System greatly reduces noise producing energy that results from metal-on-metal contact due to differential rotation and expansion. The noise dampening system consists of the following five step procedure:

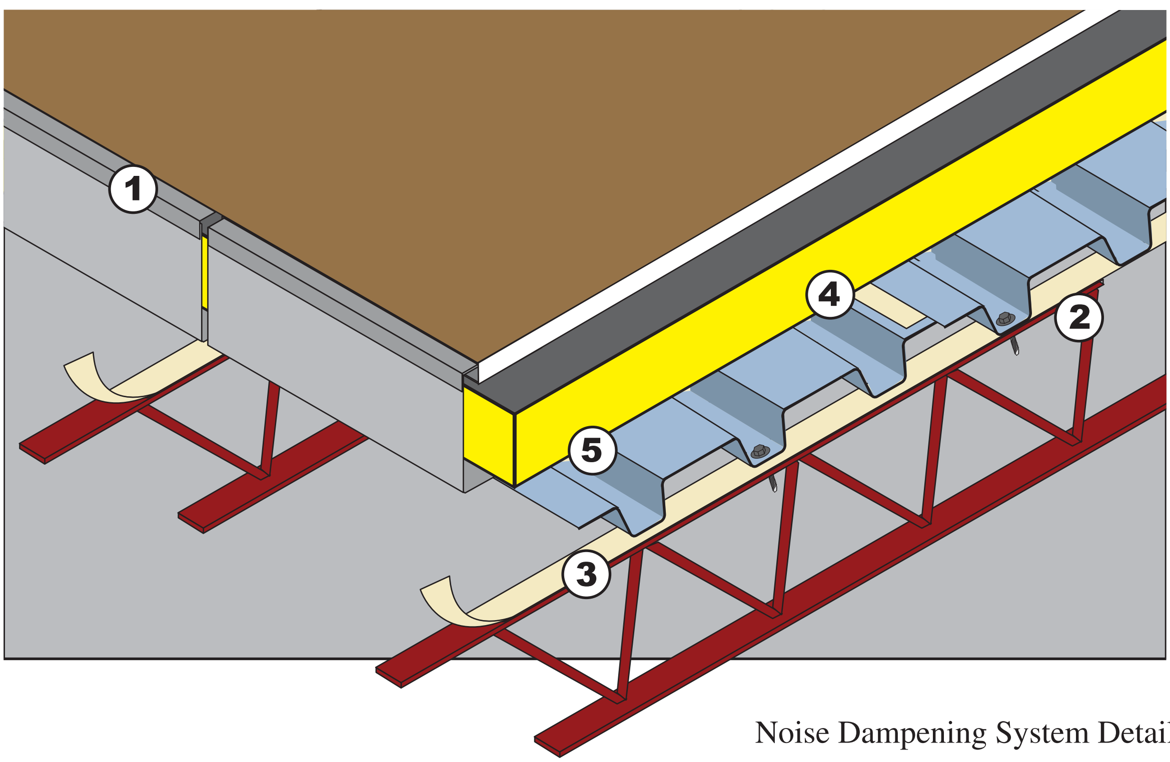
1. Deck Termination Supports: All termination supports for the steel roof deck must be constructed with expansion relief at a maximum of 20 feet. Perimeter expansion must not be allowed to accumulate in runs in excess of 20 feet. To accomplish this, Loadmaster's Terminator System is strongly recommended.

2. Deck Attachment: Steel deck sheets are to be attached to the steel structure with non-welded connections. Powder actuated pins or screws are recommended.

3. Structural Supports: All structural supports for the steel roof deck are isolated from the steel deck by the installation of self-adhering Loadmaster Noise Gasketing.

4. Steel Deck Interface: At all interfaces of the steel deck sheets, such as overlapping or butting end joints and side laps of adjacent sheets, self-adhering Loadmaster Noise Gasketing separates the individual steel deck sheets so that sheets do not contact each other at any point.

5. Steel Deck/Insulation Interface: Loadmaster Noise Dampening System was tested on deck panels attached to stationary supports. Secondary stresses induced into the deck due to extremely cold temperature installation, vastly different shear wall/movement frame stress, or unusual and complex roof framing are beyond the control of Loadmaster. It is recommended that the Prime Design Professional consult with the Loadmaster Technical Department before making his final design.

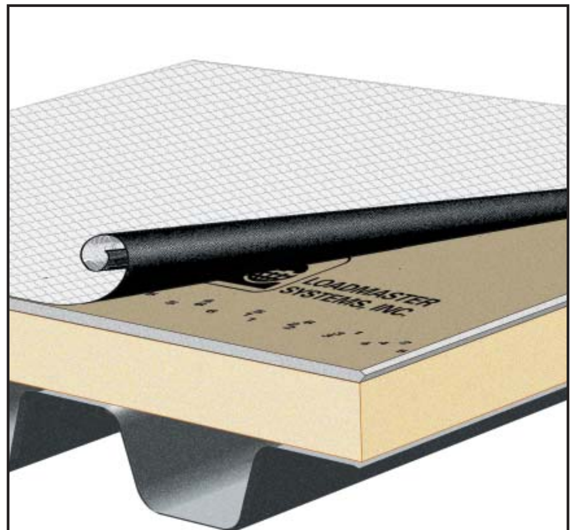


Noise Dampening System Detail

U.S. Pat. No. 6,250,036B1

Duraclad

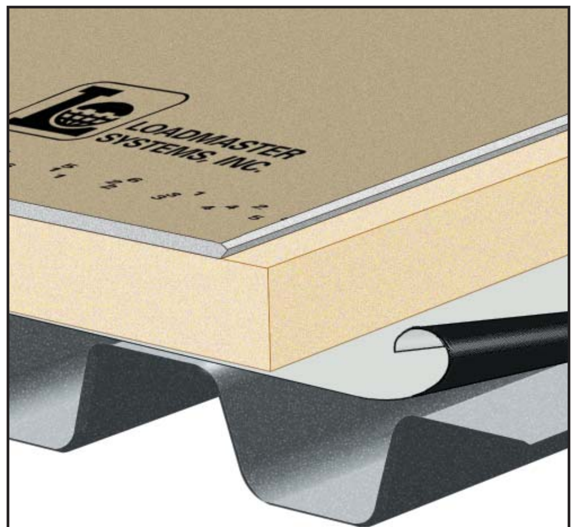
Duraclad is a 40 mil peel-and-stick roofing underlayment comprised of two layers of SBS modified bitumen surrounding a polyester fiber core. Regular Duraclad features a reflective white fabric top surface for foot traffic safety and increased ultraviolet light resistance. Smooth surface Duraclad features a smooth black asphalt surface for accepting bituminous coatings. A two-piece release film on the bottom surface facilitates positioning of the sheet prior to final placement. Removal of the release film allows the sheet to adhere to the surface below. Bonding is immediate and facilitated by slight pressure. Duraclad is self-sealing around screws and its high grade asphalt will resist decay and decomposition.



Duraclad

Duraperm ES

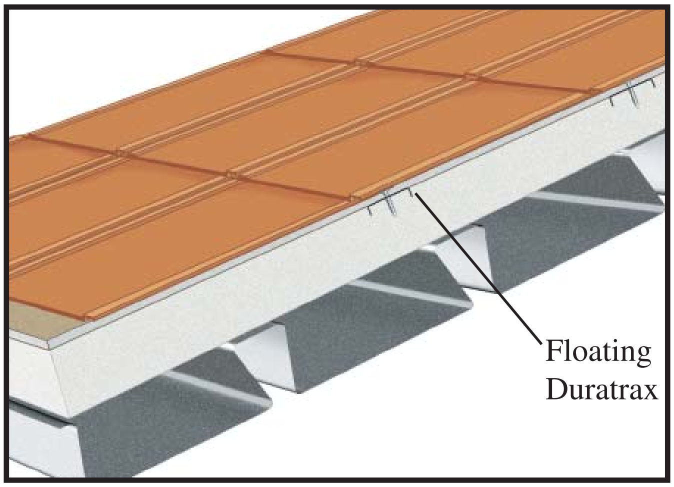
Duraperm ES Vapor Barrier is identical to regular Duraperm except that it is surfaced with cross-linked polyethylene film which gives it the strength necessary to span the open flutes of the deck. Therefore, Duraperm ES may be installed directly over steel deck. Removal of the release sheet allows Duraperm ES to adhere to the surface below. Bonding is immediate and facilitated by slight pressure. Duraperm's self-sealing qualities around screws have been tested and Duraperm ES retains vapor barrier performance (less than 0.5 perms) with as many as 10 screws per square foot!



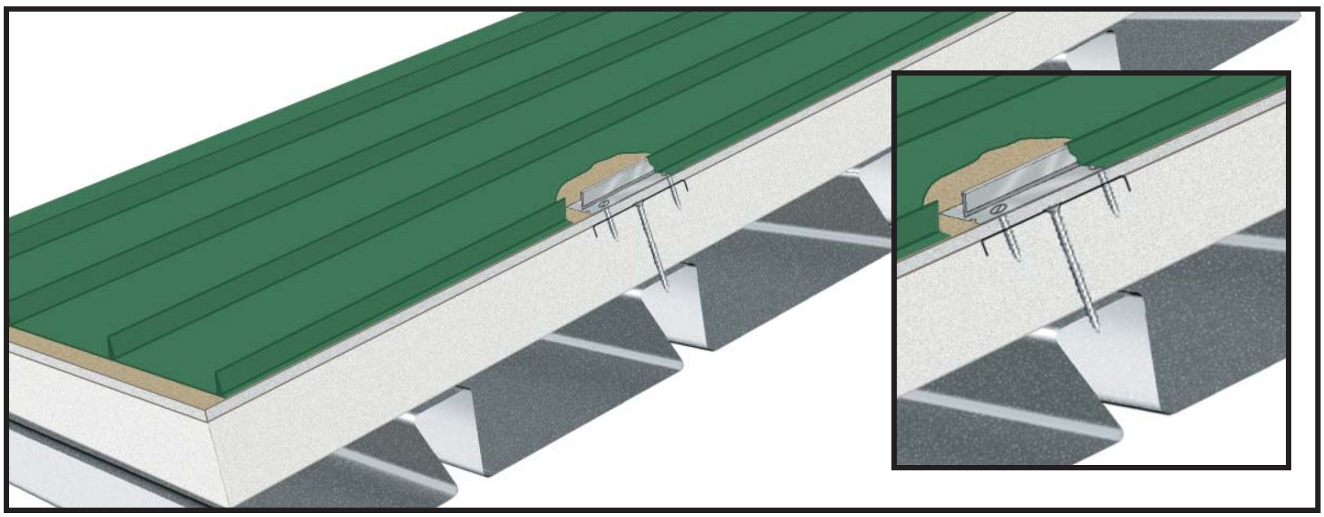
Duraperm ES

Duratrax

Duratrax is a concealed fastening system designed to function within the Loadmaster Roof Deck Assembly. It provides anchorage for roof coverings that require mechanical attachment. Duratrax consists of a series of galvanized steel channels embedded in the insulation underneath the top layer of Duraflex Mineral Board. The Duratrax channels may be screw attached through the insulation to the steel deck. Without screws to the steel deck, the Duratrax channel is "free floating". In this case, the Duraflex Mineral Board holds the Duratrax channels in place against upward movement. The legs of the Duratrax channel, which are embedded downward into the insulation, prevent lateral movement. Duratrax channels are 4" wide and range in thickness from 18 ga. to 25 ga. Duratrax is recommended for use with tile, slate or metal panel roofing.

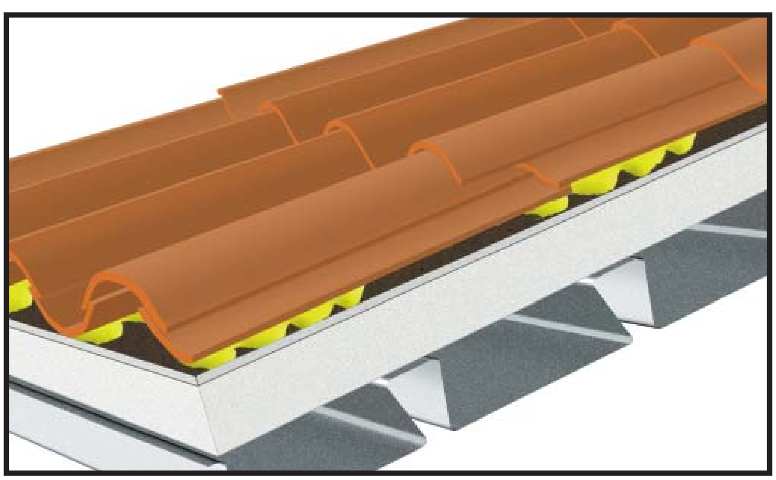


US Patent No 5,584,153



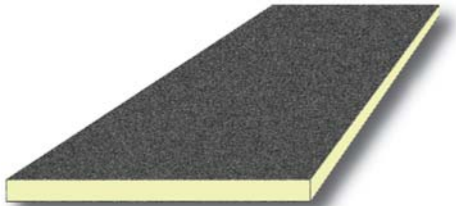
Foam/Tile Attachment

Loadmaster has tested and approved an economical method of tile attachment using a spray foam adhesive on top of the Duraclad peel-and-stick underlayment. This high wind uplift resistant attachment method along with the watertightness properties of Duraclad insure long, trouble-free performance for the tile roofs. For complete information, contact Loadmaster's Technical Department.



Meets SBCCI 11-99 wind resistance requirements.

Meets Dade County TAS 101-95 Static Uplift requirements.



Loadmaster Polyisocyanurate Insulation

Ployisocyanurate Insulated Assemblies Summer "U" and "R" Values

Overall Assembly Design Criteria		RIC/TIMA Six Month Conditioning Method (1)		
"U" Factor	"R" Factor	Overall Assembly Resistance Value	Insulation Thickness (inches)	Loadmaster Assembly Designation
0.35	2.82	2.82	None	Basic
0.10	10.00	10.07	1.1	I-110 RT
0.09	11.11	11.52	1.3	I-130 RT
0.08	12.50	12.95	1.5	I-150 RT
0.07	14.29	14.48	1.7	I-170 RT
0.06	16.67	16.75	2.0	I-200 RT
0.05	20.00	20.50	2.5	I-250 RT
0.04	25.00	25.15	3.1	I-310 RT
0.033	30.00	30.68	3.8	I-380 RT
0.028	35.00	34.58	4.5	I-450 RT

Polyisocyanurate Insulated Assemblies Winter "U" and "R" Values

Overall Assembly Design Criteria		RIC/TIMA Six Month Conditioning Method (1)		
"U" Factor	"R" Factor	Overall Assembly Resistance Value	Insulation Thickness (inches)	Loadmaster Assembly Designation
0.44	2.82	2.27	None	Basic
0.10	10.00	10.27	1.2	I-120 RT
0.09	11.11	11.04	1.3	I-130 RT
0.08	12.50	12.50	1.5	I-150 RT
0.07	14.29	14.71	1.8	I-180 RT
0.06	16.67	16.25	2.0	I-200 RT
0.05	20.00	20.07	2.5	I-250 RT
0.04	25.00	25.44	3.2	I-320 RT
0.033	30.00	30.23	3.8	I-380 RT
0.028	35.00	35.44	4.7	I-470 RT

Although ultimate resistance values of these assemblies will depend on individual installation circumstances, recent investigations have indicated that reduction in polyisocyanurate foam insulation thermal performance will continue to occur after the RIC/TIMA six-month conditioning period. To establish the long-term, design thermal resistance value of this product, Loadmaster Systems, Inc. suggests the use of LTTR values.

1. Overall "U" Factors and "R" (resistance) Values were determined by combining the Loadmaster Basic Assembly resistance value as tested by ASTM C-236 test procedure with the resistance value of the polyisocyanurate insulation as determmined by ASTM C-518 procedure in accordance with the six-month conditioning procedure outlined in RIC/TIMA Technical Bulletin 281-1.

2. Overall values include air films and gravel surfaced roof. Values for attic space, ceiling and/or attic insulation have not been included.

Loadmaster Expanded Polystyrene Insulation

Polystyrene Insulated Assemblies Summer "U" and "R" Values

Overall Assembly Design Criteria		Overall Assembly Resistance Value	Insulation Thickness (inches)	Loadmaster Assembly Designation
"U" Factor	"R" Factor			
0.35	2.82	2.82	None	Basic
0.18	5.56	5.66	13/16"	P-013
0.10	10.00	9.84	1-3/4"	P-134
0.09	11.11	10.95	2"	P-200
0.08	12.50	12.34	2-5/16"	P-205
0.07	14.29	14.29	2-3/4"	P-234
0.06	16.67	16.52	3-1/4"	P-314
0.05	20.00	20.00	4"	P-400
0.04	25.00	25.12	5-5/8"	P-558

Polystyrene Insulated Assemblies Winter "U" and "R" Values

Overall Assembly Design Criteria		Overall Assembly Resistance Value	Insulation Thickness (inches)	Loadmaster Assembly Designation
"U" Factor	"R" Factor			
0.44	2.27	2.27	None	Basic
0.10	10.00	10.06	2"	P-200
0.09	11.11	11.02	2-1/4"	P-214
0.08	12.50	12.47	2-5/8"	P-258
0.07	14.29	14.39	3-1/8"	P-318
0.06	16.67	16.79	3-3/4"	P-334
0.05	20.00	19.92	4-9/16"	P-409
0.045	22.22	22.32	5-5/8"	P-558

1. Overall "U" Factors and "R" (resistance) Values represent results based on a range of tests conducted at Southwest Research Institute, San Antonio, Texas, in accordance with ASTM C-236 test procedures.

2. Overall values include air films and gravel surfaced roof. Values for attic space, ceiling and/or attic insulation have not been included.

Building Noise Abatement:

1. Noises from outside the building: Loadmaster has performed the Sound Transmission Coefficient (STC) test on its most popular assemblies. Without a ceiling, STC ratings can achieve a rating up to 45. Adding the acoustical benefit of attic space and ceiling, these assemblies may provide an STC rating exceeding 50. Values are in accordance with ASTM E-90, ASTM E-413 and ASTM E-1332.

2. Noises from inside the building: Many projects with wide open spaces require a quiet environment. To reduce sound reverberation off the steel deck, Loadmaster can provide various steel deck sections with perforated flutes or ribs and fiberglass insulation sound batts. These deck sections have been tested in accordance with ASTM C-423 and ASTM E-795 with excellent results as measured by the Noise Reduction Coefficient (NRC). See the table below for detailed results.

Acoustical Ratings for Loadmaster Steel Sections

Loadmaster Steel Section (All Gauges Within Each Profile)	**Sound Absorption Coefficients 1/3 Octave Center Frequency**						Noise Reduction Coefficiient
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	
Pyro Span Acoustical	0.53	0.95	1.02	0.96	0.55	0.30	0.85
Super Span 150 Acoustical	0.53	0.95	1.02	0.96	0.55	0.30	0.85
Super Span 200R Acoustical	0.26	0.60	1.18	0.98	1.00	0.91	0.95
Super Span 300 Acoustical	0.93	1.26	1.09	0.90	0.56	0.37	0.95
Super Span 350R Acoustical	0.32	1.00	1.00	0.96	0.98	0.73	1.00
Super Span 450 Acoustical	0.37	0.57	0.91	0.70	0.52	0.49	0.70
Super Span 600 Acoustical	0.34	0.71	0.87	0.69	0.57	0.53	0.70
Super Span 750 Acoustical	0.48	0.77	0.88	0.86	0.70	0.60	0.80
Super Span P150 Acoustical	0.20	0.33	0.74	1.00	0.57	0.41	0.65
Super Span P300 Acoustical	0.46	0.64	1.12	0.99	0.76	0.58	0.90
Super Span P450 Acoustical	0.58	0.95	1.11	0.91	0.85	0.59	0.95
Super Span P600 Acoustical	0.61	0.96	1.04	0.84	0.73	0.51	0.90
Super Span P750 Acoustical	0.84	0.98	1.01	0.87	0.82	0.59	0.90

Testing was performed in accordance with ASTM Test Methods C-423 and E795.

The orientation of the acoustical deck is also very important to the overall ability to absorb sound. The Loadmaster Super Span 200R Acoustical and Super Span 350R Acoustical deck sections provide maximum acoustical surface orientation and, therefore, are two of the most effective acoustical deck sections available on the market today.

3. Noises from the building structure: In sound sensitive areas, such as libraries, study areas, sanctuaries, chapels, media centers, theaters, etc., Loadmaster's Noise Dampening System* provides a means of reducing noises created by building movement.

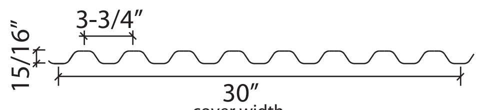
All steel structures are subject to movement under various loads such as thermal expansion, wind and air pressure changes. When steel structures move, noises can be generated. Steel roof decks in these structures act like a drumhead, transmitting and amplifying the noises, which can be significant and objectionable enough to make the space unacceptable for use.

Loadmaster's unique Noise Dampening System greatly reduces sound producing energy that contacts the steel roof deck through a patented 5-step procedure. The noises are dampened and the transmission of the noises through the exposed steel roof deck are greatly reduced. See page 13 for more details.

*U.S. Pat. No. 6,250,036 B1

STEEL OPTIONS Design Values for Safe Uniform Total Load Capacity

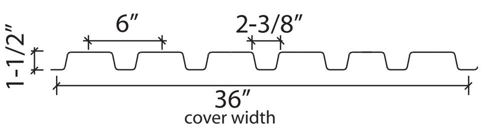
Heavy Duty



Finish Options: C D — See Note 2

Span Condition	Loadmaster Designation	4'0"	4'6"	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"
		Center to Center Spacing of Structural Supports							
2	HD-25	121	96	72	58	48	40	---	---
	HD-24	123	98	74	60	52	44	38	---
	HD-22	140	119	100	82	67	55	49	41

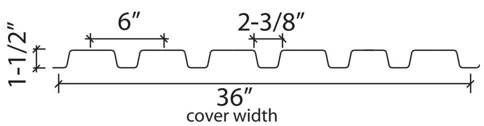
Pyro Span



Finish Options: A B C D E* — See Notes 3 & 5

Span Condition	Loadmaster Designation	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"
		Center to Center Spacing of Structural Supports										
3	PS-22	127	105	88	75	65	56	50	44	39	35	31
	PS-20	157	130	109	93	80	70	61	54	47	41	37
	PS-18	209	173	145	124	107	93	82	70	61	53	47
	PS-16	265	219	184	157	135	118	102	87	75	65	57

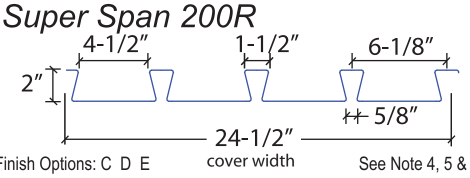
Super Span 150



Finish Options: A B C D E* — See Notes 2 & 5

Span Condition	Loadmaster Designation	5'0"	5'6"	6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"
		Center to Center Spacing of Structural Supports										
3	SS150-22	146	121	102	87	75	65	58	51	46	41	37
	SS150-20	182	151	127	109	94	82	72	64	57	51	46
	SS150-18	244	203	171	146	126	110	97	86	76	69	62
	SS150-16	309	256	216	184	159	139	122	108	97	87	78

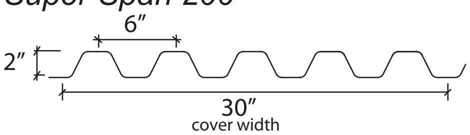
Super Span 200R



Finish Options: C D E — See Note 4, 5 & 6

Span Condition	Loadmaster Designation	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'6"	11'0"	12'0"
		Center to Center Spacing of Structural Supports									
3	SS200R-20	125	109	96	85	76	68	61	56	51	43
	SS200R-18	169	148	130	115	102	92	83	75	68	55
	SS200R-16	218	190	167	148	132	119	107	94	83	66

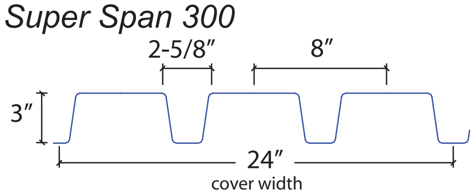
Super Span 200



Finish Options: A B C D E — See Notes 2, 5 & 6

Span Condition	Loadmaster Designation	9'0"	9'6"	10'0"	10'6"	11'0"	11'6"	12'0"
		Center to Center Spacing of Structural Supports						
3	SS200-22	80	71	62	55	49	44	41
	SS200-20	100	86	75	66	59	53	51
	SS200-18	138	119	104	91	80	72	65

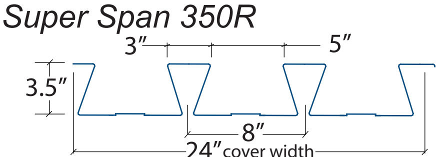
Super Span 300



Finish Options: A* B C D E* — See Notes 2, 5 & 6

Span Condition	Loadmaster Designation	9'6"	10'0"	10'6"	11'0"	11'6"	12'0"	12'6"	13'0"	13'6"	14'0"	14'6"	15'0
		Center to Center Spacing of Structural Supports											
3	SS300-22	78	70	64	58	53	49	36	33	31	29		
	SS300-20	100	90	82	74	68	63	46	43	40	37		
	SS300-18	138	125	113	103	94	87	64	59	55	51		
	SS300-16	168	151	137	125	114	105	77	71	66	61		

Super Span 350R



Finish Options: C D E* — See Notes 4, 5 & 6

Span Condition	Loadmaster Designation	12'0"	13'0"	14'0"	15'0"	16'0"	17'0"	18'0"	19'0"	20'0"	21'0"
		Center to Center Spacing of Structural Supports									
2	SS350R-20	67	57	50	43	38	34	30			
	SS350R-18	101	86	74	64	57	50	45	40	36	33
	SS350R-16	140	119	103	89	79	70	62	56	50	46

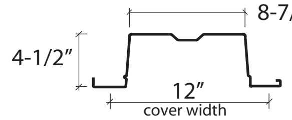
Coating Options: A = White Primer Coating B = Gray Primer Coating C = G-60 Galvanized Coating D = G-90 Galvanized Coating E = White Primer Over G-60 Galvanized Coating

1. Steel section physical properties were computed in accordance with the specifications section of the "Cold-Formed Steel Design Manual", published by the American Iron and Steel Institute (AISI), and also conform to design specifications of the Steel Deck Institute.
2. All values, expressed in pounds per square foot (psf), are based on a uniformly loaded Loadmaster Basic Assembly constructed on a two-span condition per empirical data derived from tests conducted and certified by Southwestern Laboratories, Inc., Dallas, Texas. Total loads include 10 psf dead load. Depending upon the support spacing, the loads shown are governed by either L/240 live load deflection limit or an allowable flexural stress of 36,000 psi. This steel has a minimum yield strength of 80,000 psi.
3. Total loads include 10 psf dead load. Depending upon the support spacing, the loads shown are governed by either L/240 live load deflection limit or an alowable flexural stress of 20,000 psi. This steel has a minimum yield strength of 33,000 psi.
4. Total loads include 10 psf dead load. Depending upon the support spacing, the loads shown are governed by either L/240 live load deflection limit or an allowable flexural stress of 24,000 psi. This steel has a minimum yield strength of 40,000 psi.
5. Acoustical steel sections sustain 95% of the loads printed on this table.
6. Adequate end bearing and internal support bearing are necessary for the steel sheet to develop the flexural capacity as shown above. The project design professional can determine the required bearing length using the AISI "Cold-Formed Steel Design Manual" or the published allowable end reactions shown in the Loadmaster Diaphragm Design Manual. Bearing length determination and design is not the responsibliity of Loadmaster Systems, Inc. Adequate bearing design responsibility lies with the project design professional.

* minimum quantity restrictions - contact Loadmaster for details.

STEEL OPTIONS Design Values for Safe Uniform Total Load Capacity

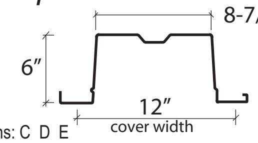
Super Span 450



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		14'0"	15'0"	16'0"	17'0"	18'0"	19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	25'0"
2	SS450-20	69	64	55	47	41							
	SS450–18	105	88	74	64	55	49	43					
	SS450-16	137	114	96	82	71	62	55	48	42			
	SS450-14	170	141	118	101	87	76	67	58	50	44		

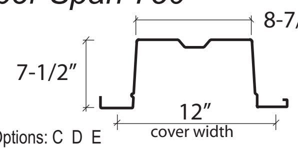
Super Span 600



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		16'0"	17'0"	18'0"	19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	25'0"	26'0"	27'0"
1	SS600-18	114	107	96	83	73	62	54	47	41			
	SS600-16	171	145	124	107	94	80	68	59	52	46	41	
	SS200-14	212	180	154	133	116	98	84	72	63	56	50	45

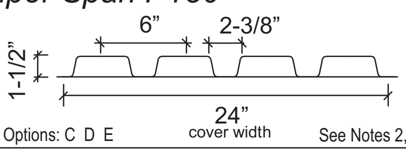
Super Span 750



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		18'0"	19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	25'0"	26'0"	27'0"	28'0"	29'0"
1	SS750-18	95	90	85	81	78	70	61	54	48	43		
	SS750-16	166	157	148	124	105	90	78	68	60	54	48	40
	SS750-14	240	211	183	153	130	111	96	84	74	66	59	48

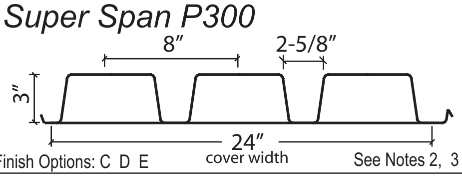
Super Span P150



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		6'0"	6'6"	7'0"	7'6"	8'0"	8'6"	9'0"	9'6"	10'0"	10'6"	11'0"	
2	SSP150-20/20	170	145	125	109	95	85	75	68	61	55	50	
	SSP150-18/18	220	187	162	141	124	110	98	88	79	72	65	
	SSP150-16/16	272	232	200	174	153	136	121	109	98	89	81	

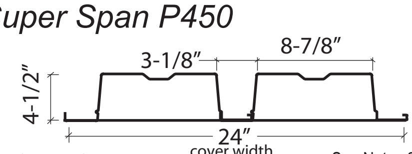
Super Span P300



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		9'0"	9'6"	10'0"	10'6"	11'0"	11'6"	12'0"	12'6"	13'0"	13'6"	14'0"	14'6"
2	SSP300-20/20	125	118	112	107	102	96	88	81	75	69	65	60
	SSP300-18/18	210	191	172	156	142	130	119	110	102	94	88	82
	SSP300-16/16	271	243	219	199	181	166	152	140	130	120	112	104

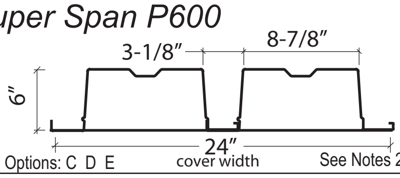
Super Span P450



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		14'0"	15'0"	16'0"	17'0"	18'0"	19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	26'0"
1	SSP450-18/18	137	123	104	89	77	67	59	51	45			
	SSP450-16/16	207	162	136	116	100	87	77	66	57	50	44	
	SSP450-14/16	231	191	160	136	117	101	89	76	66	57	51	41

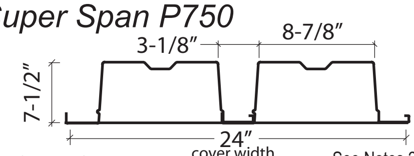
Super Span P600



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		18'0"	19'0"	20'0"	21'0"	22'0"	23'0"	24'0"	26'0"	28'0"	30'0"		
1	SSP600-18/18	101	96	91	84	72	63	55	43				
	SSP600-16/16	173	149	130	110	93	81	70	55	41			
	SSP600-14/16	203	175	152	128	109	94	82	64	51	43		

Super Span P750



Finish Options: C D E — See Notes 2, 3 & 4

Span Condition	Loadmaster Designation	Center to Center Spacing of Structural Supports											
		20'0"	21'0"	22'0"	23'0"	24'0"	26'0"	28'0"	30'0"	32'0"	34'0"		
1	SSP750-18/18	85	81	78	74	71	62	50	41				
	SSP750-16/16	149	142	136	122	105	81	64	52	44			
	SSP750-14/16	237	198	167	143	123	94	74	60	50	43		

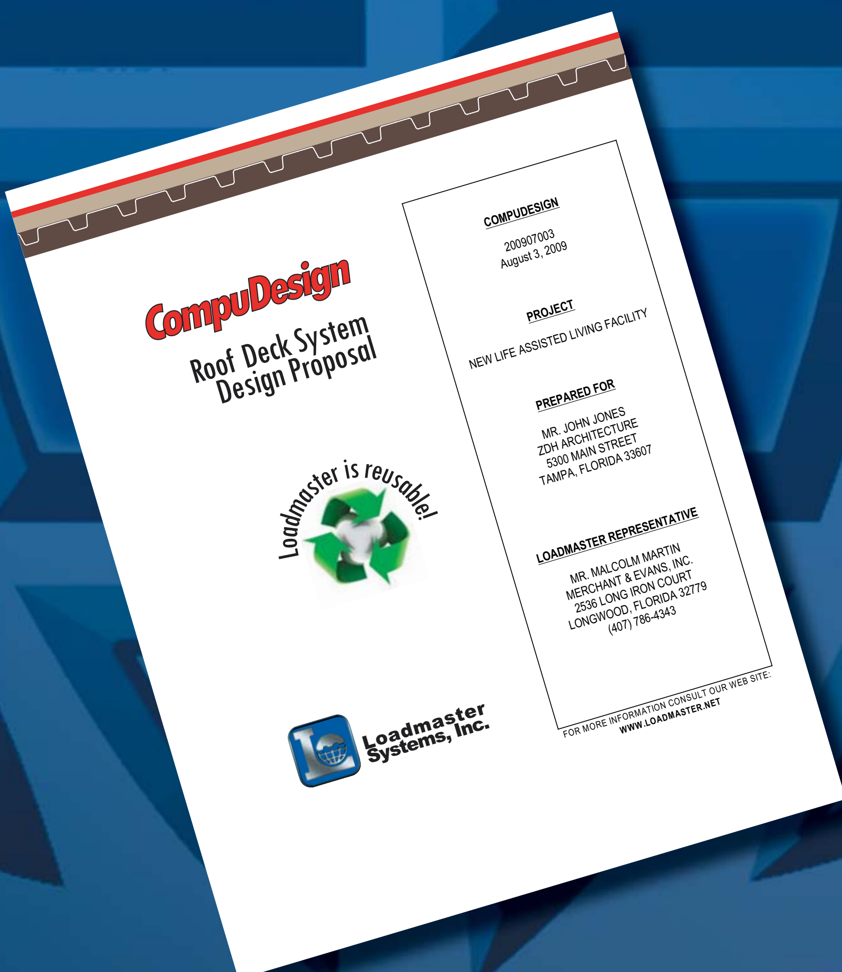
Coating Options: A = White Primer Coating B = Gray Primer Coating C = G-60 Galvanized Coating D = G-90 Galvanized Coating E = White Primer Over G-60 Galvanized Coating

1. Steel section physical properties were computed in accordance with the specifications section of the "Cold-Formed Steel Design Manual", published by the American Iron and Steel Institute (AISI), and also conform to design specifications of the Steel Deck Institute.
2. Total loads include 7 psf dead load. Depending upon the support spacing, the loads shown are governed by either L/240 live load deflection limit, end bearing reactions (4"), intermediate bearing reactions (6") or, where structural support spacing is over 20'-0", deflection is limited to 1" maximum or an allowable flexural stress of 20,000 psi. This steel has a minimum yield strength of 33,000 psi.
3. Acoustical steel sections sustain 95% of the loads printed on this table.
4. Adequate end bearing and internal support bearing are necessary for the steel sheet to develop the flexural capacity as shown above. The project design professional can determine the required bearing length using the AISI "Cold-Formed Steel Design Manual" or the published allowable end reactions shown in the Loadmaster Diaphragm Design Manual. Bearing length determination and design is not the responsiblity of Loadmaster Systems, Inc. Adequate bearing design responsibility lies with the project design professional.

* minimum quantity restrictions - contact Loadmaster for details.

A design service furnished without charge to the Design Professional

CompuDesign



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   - Building Design requirements
   - Roof deck assembly performance requirements
   - Loadmaster assembly designed performance
   - Loadmaster assembly engineered drawings
   - Loadmaster Terminator details
   - Job specific specifications
5. Specifications and assembly drawings are also available in Word and AutoCAD formats.

Loadmaster Systems, Inc.

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