

Architectural Deck

CEILING + CLADDING SYSTEMS



NEW MILLENNIUM
BUILDING SYSTEMS
Building a better steel experience.

Architectural Deck



Architectural Deck provides aesthetic appeal for exposed metal deck systems placed in roof-ceiling and cladding assemblies. With New Millennium Building Systems as your collaborative resource, architects and owners can specify Architectural Deck with confidence.

Architectural Deck is produced with careful attention to:

- Substrate flatness and smoothness
- Paint coating purity and film integrity
- Color retention and gloss level
- Surface protection processes
 - Packaging and shipping
 - Site storage and installation

To suit your application, Architectural Deck offers the options of paint or primer-only finishes via factory-controlled applications of high-performance coating systems. Factory-applied finish coatings effectively eliminate on-site painting activities and help shorten construction schedules. Uniform, consistent coatings reduce paint volume and mitigate waste that must be discarded in accordance with local jurisdictions.

As an architectural metal component, Architectural Deck utilizes special handling and installation processes. To help ensure successful project execution, we suggest partnering with experienced contractors certified for installing painted metal deck products.



CEILING + CLADDING SYSTEMS

- **Visual Elements**

- Utilizes critical surface standards
- Ceiling systems: interior spaces
- Cladding systems: exterior surfaces

- **Engineered Finish Coating Systems**

- Factory-applied pre-treatments and paints
- Exposure environment
 - Full to incidental UV
 - Humid, marine, chemical and anti-microbial
- Warranted color retention and film integrity

- **Sustainability**

- LEED credits
- Life-cycle analysis
- Factory-coated exposed deck ceilings
 - Eliminates secondary ceiling materials
 - Reduces on-site Volatile Organic Compounds (VOCs)

- **Architects and Engineers: Design-Assist**

- Project consultation
- Narratives and specifications
- Certified engineering designs

- **Contractors: Build-Assist**

- Enhanced means and methods
- BIM process management



Ceiling and Cladding Systems



Architectural Deck



ARCHITECTURAL DECK CEILING SYSTEMS

Architectural Deck Ceilings combine with exposed structural frames to create striking and spacious interiors. Along with its aesthetic value, multi-functioning Architectural Deck provides structure for any weather-tight, commercial-grade roof assembly.

Architectural Deck Ceilings may include acoustical treatments to absorb sound energy from reverberating into occupied spaces. The ceiling applications integrate lighting, electrical, plumbing and fire suppression systems.

In other ceiling applications, perforated decking can be placed into suspended grids. Offering a cost-effective solution to screen exposed structural elements, mechanical, plumbing and electrical systems.

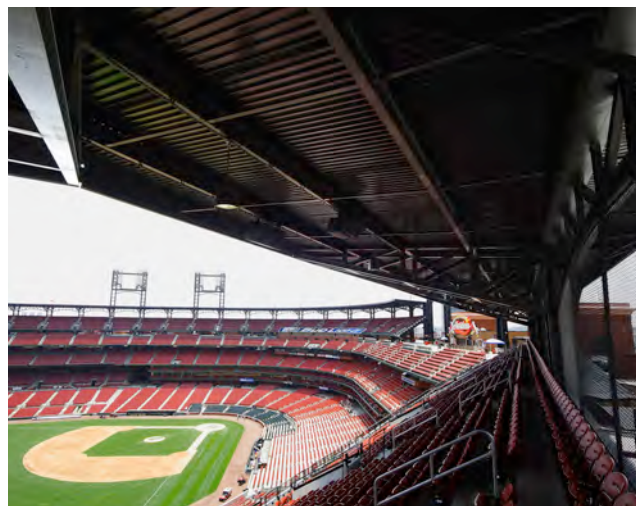
CEILING SYSTEMS



- **Aesthetic Element**
 - Form and shape
 - Flat, curved or angular orientation
 - Ribbed, lineal plank and smooth surface panels
 - Concealed fastening
 - Color and texture
 - Engineered coatings
 - Smooth or embossed surface texture
- **Multi-Functional**
 - Long-span capacities up to 34 feet
 - Reduces structural members and obstructions
 - Deck cavity space
 - Conceals MEP and fire suppression lines
 - New Millennium furnished accessories
 - Access panels
 - Hanging devices
- **Sound Control**
 - Acoustical treatments
 - Noise Reduction Coefficient (NRC) ratings up to 1.15
- **Lighting Design**
 - As deck ceiling system
 - Reflectivity factors up to 0.75
 - In suspended ceiling grid
 - Deck perforations diffuse light



Architectural Deck



ARCHITECTURAL DECK CLADDING SYSTEMS

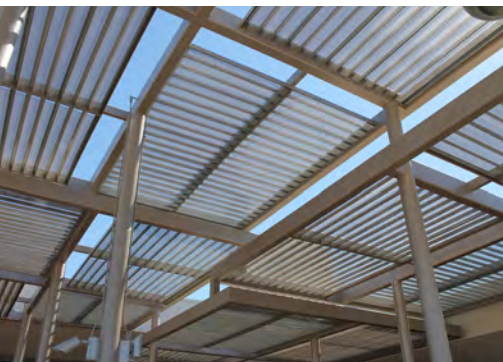
Architectural Deck Cladding may be oriented in any direction on any structural frame to create exterior surfaces: sun-screens, canopies, soffits or screen walls. Designers may select from an array of profiles and surface treatments to create their preferred aesthetic and performance results.

Architectural Deck Cladding activates outdoor space and complements the natural environment. The complete system approach considers substrate stability, coating performance, structural capacities and rainwater management.

CLADDING SYSTEMS



- **Aesthetic Element**
 - Form and shape
 - Flat, curved or angular orientation
 - Ribbed, lineal plank and smooth surface panels
 - Concealed fastening
 - Color and texture
 - Engineered coatings
 - Surface options
 - Solid: shades sunlight
 - Perforated: diffuses sunlight
- **Multi-Functional**
 - Long-span capacities up to 34 feet
 - Reduces structural members and obstructions
- **Systems Integration**
 - Acoustics
 - Lighting
 - Audio/visual display
- **Performance Options**
 - Moderate to aggressive UV exposure
 - Diverse climate applications
 - Rainwater management
 - Combine with commercial grade roof system
 - Weather-tight assembly
 - Single-ply deck installation
 - Shed and divert rainwater



Architectural Solutions



ARCHITECTURAL STEEL JOIST AND DECK INTEGRATION

Architecturally unique roofline designs are practical and economical using special profile steel joists. Our leading development of engineering specifications enables over 40,000 special profile steel joist design possibilities. New Millennium Building Systems provides comprehensive support from early design including BIM-based expertise to on-site delivery.

We manufacture a complete range of special profile steel joists, including bowstring, arched, scissor, and double-pitched joists. Our special profile steel joists are designed and manufactured in accordance with the specifications of the Steel Joist Institute.

When integrated with our ceiling and cladding deck solutions, you achieve a system approach optimized for unmatched cost and performance.

STEEL JOIST AND DECK INTEGRATION



- **Design Assist**

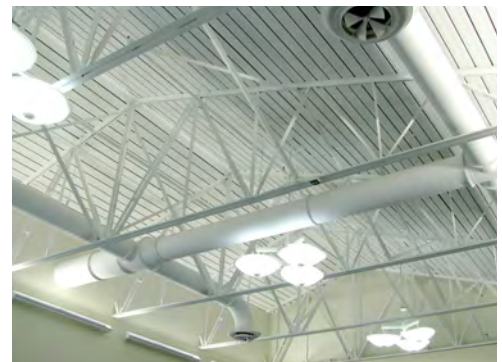
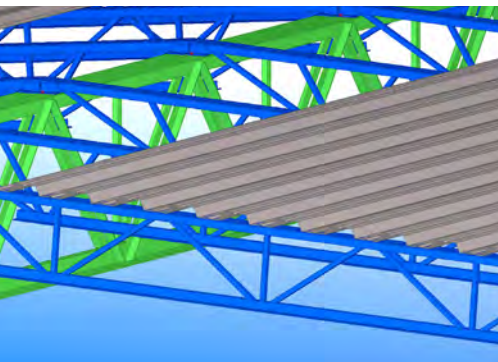
- Early collaboration to help reduce cost
- Experienced design professionals
- Specially developed software
- Over 40,000 joist designs

- **BIM Design Collaboration**

- Industry-leading Dynamic Joist® BIM component
- Manage cost and shorten timelines
- Trusted experience you can build on

- **Digital Specification Tools**

- Web-based specification tools
- Standard steel joists and Joist Girders
- Special profile steel joists
- Steel decking specification tools
- Load tables and diaphragm design for roof, form and composite deck



DESIGN ASSIST



ARCHITECTURAL DECK: DESIGN PROCESS

Effective communication is critical to successful Architectural Deck installations. As your consultant, system selection, narratives and specifications are vetted during the schematic design phase. As the design develops, we assist in resolving budget and constructibility means in collaboration with our installation partners.

With the prominence of Building Integrated Modeling (BIM), architects and engineers can incorporate Architectural Deck profiles in the initial design. We provide Component Models for Autodesk Revit® and Tekla Structures Software, and CAD profiles for cross-platform computer software. This allows the design team to visualize Architectural Deck implementation and to convey essential imagery to owners.

We assist engineers with structural performance assessments during design development. When requested, certified specialty engineering designs are available through New Millennium. Architectural Deck is compliant with the International Building Code, and select FM Global and UL-approved roof assemblies.

BUILD ASSIST



Applied Expertise

- Structural evaluation
- Coatings and finishes
- Dedicated project managers

Partnerships with Architectural Metals Contractors

- Single-source installation
- Combine all architectural metals in one contract

Mock-up Assembly

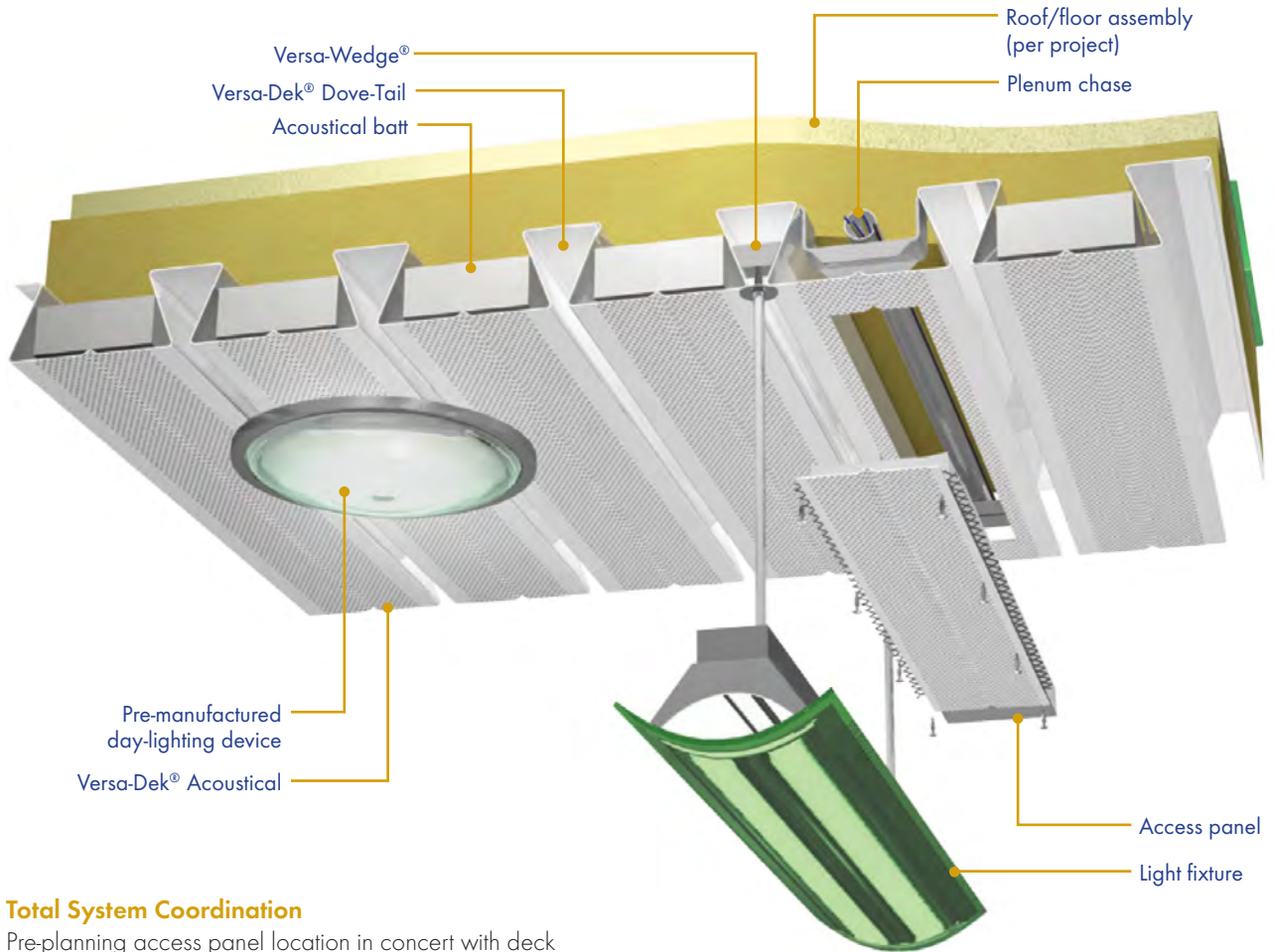
- Evaluate constructibility
- Standard set for construction



ARCHITECTURAL DECK: CONSTRUCTION

Factory-coated Architectural Deck emphasizes enhanced job-site handling, storing and installation processes. We have partnered with leading roofing and architectural metals contractors to install Architectural Deck. The system, for ease, can be linked to a single contract covering all exterior wall and roof assemblies. This gives owners and contractors the opportunity to negotiate with one party for the building envelope.

ACCESSORIES



Total System Coordination

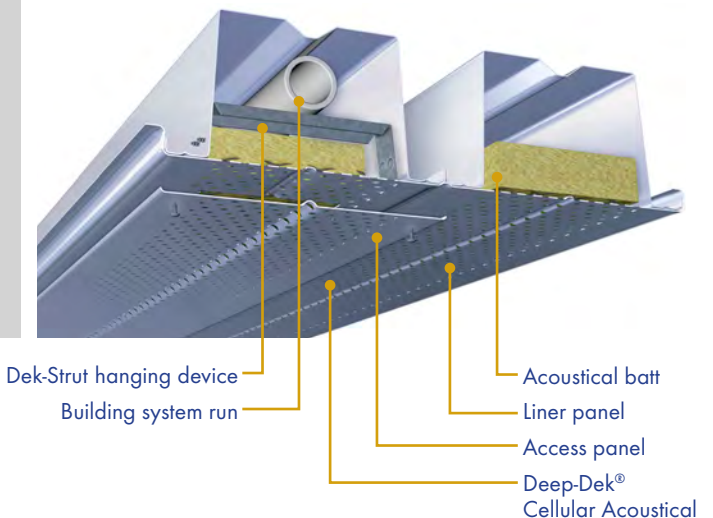
Pre-planning access panel location in concert with deck hanger accessories offers orderly, consistent appearance of ceiling plane.

Deck Cavity to Conceal:

- Fire suppression system
- Plumbing
- Electrical
- Audio/visual

Versa-Wedge® and Dek-Strut Hanging Devices for:

- Safety devices
- Lighting
- Signage and way finding



COATING SYSTEMS

Tailoring the best paint system for exposed deck encompasses several factors: substrate, profile, environment, color, durability and longevity. Warranted coil coatings simplify the selection process with engineered systems matched to aesthetic, environmental and performance need.

Painted Metal Systems

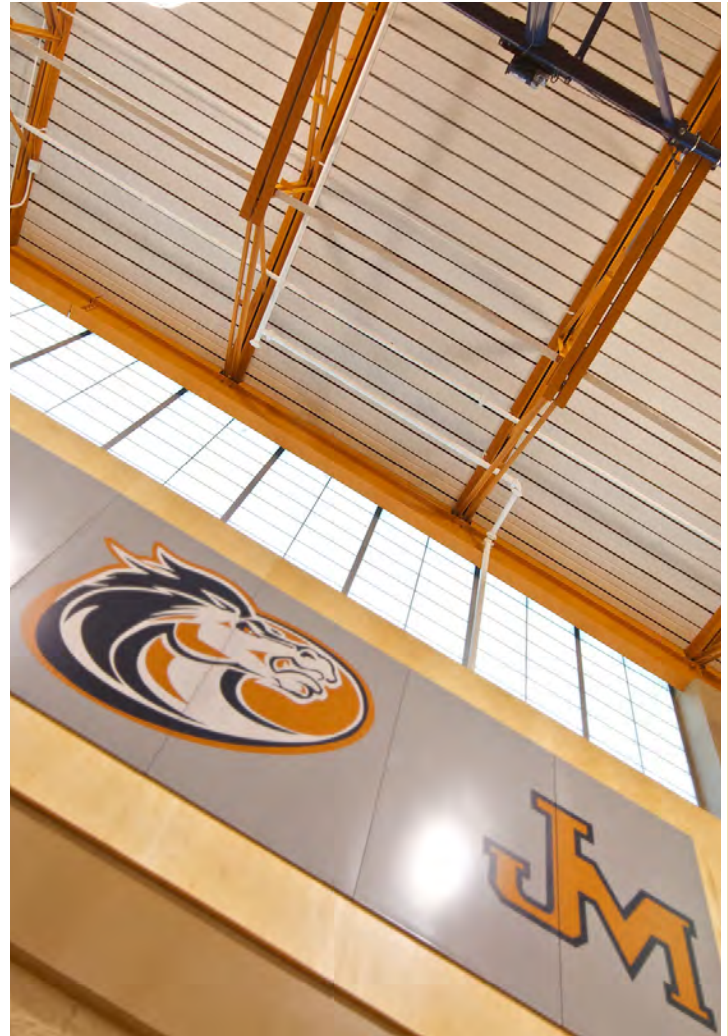
- Warranted color retention and film integrity
- Pre-treatments and primers
- Finish top coat systems:
 - Coil-coated
 - Spray-applied

Critical Surface Quality Standards

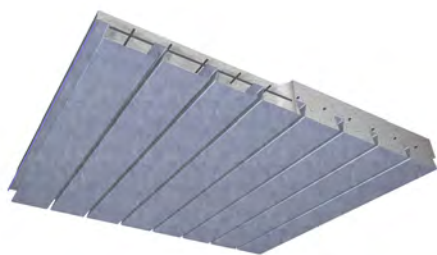
- Painting processes for:
 - Color consistency
 - Coating purity
 - Uniform coverage

Advantages

- Quality assurance
 - Customized specifications
 - Warranties for coil coatings
- Contributes to health and worker safety
 - Reduces labor at project heights
 - Reduces on-site Volatile Organic Compounds
- Factory-controlled environment
 - Uniform coating application
 - Color consistency and matching
 - Up to 75% less volume compared to field painting methods
- Cost effective



Finish Coating Systems



Clear-Coated Exposed Metal Finish



Pre-Treatment plus Primer Coating



Finish Coating Systems

ARCHITECTURAL DECK PROPERTIES

	Typical Market Offering	Architectural Deck Ceiling Systems	Architectural Deck Cladding Systems
Specification	05 31 00 Metal Deck	05 32 00 Architectural Metal Deck	07 46 19 Steel Siding
Application	INTERIOR / EXTERIOR	INTERIOR Roof-Deck Ceilings, Suspended Ceiling Panels	EXTERIOR Sunscreens, Canopies, Facades, Soffits
“Critical Surface” Standards	No	✓	✓
Certified Installers	No	✓	✓
Design Assist	Limited	✓	✓
Build Assist	No	✓	✓
Factory Finish Coating Systems	No	✓	✓
Film Integrity Warranty	No	✓	✓
Color Retention Warranty	No	✓	✓
Acoustical Option	✓	✓	✓ ¹
Perforated Option	Not Standard	✓ ²	✓
Factory Curve Option	Crimped or Walked-Down	Soft Curve: Perpendicular and Parallel to Ribs	Soft Curve: Perpendicular and Parallel to Ribs
Concealment of MEP	No	✓	✓
Access Panels for MEP	No	✓	✓
Hanging Devices	Limited	✓	✓

1 When used in water-tight roofing system

2 When used in suspended ceiling grid

LONG-SPAN COMPOSITE CEILINGS



Versa-Dek® and Deep-Dek® long-span composite floor systems offer a range of exposed ceiling options. With spans reaching up to 34 feet, unprotected fire ratings and high-load capacities, the systems can enhance any office, retail or academic space.

Versa-Dek® and Deep-Dek® long-span composite slab floor systems blend steel's erection speed and design versatility with concrete's performance and durability. They feature composite floor technology that weighs up to 40% less than comparably used cast-in-place concrete floors. An optional acoustical feature helps control sound reverberation in occupied spaces. Factory pre-treatments and primers accommodate field-applied finish paint.

The systems integrate with Diversakore™ composite beams and columns to create an architecturally exposed steel frame with fewer obstructions. They are fire-endurance-rated without reliance on protective coverings like gypsum or spray materials.

	Versa-Dek® LS Composite	Deep-Dek® Composite	Deep-Dek® Composite Cellular
Depth (in.)	3.5 ⁽¹⁾	4.5, 6.0 & 7.5 ⁽²⁾	4.5, 6.0 & 7.5
Ceiling Aesthetic	Lineal Plank	Deep Fluted	Smooth
Concealed Deck Fastening	✓	✓	✓
Factory Primer Option	✓	✓	✓
Concealment of MEP	No	Partial	Full with Access Panels
Hanging Devices	✓	✓	✓
Acoustical Treatment Option	✓	No	✓
NRC Rating	Up to 0.70	NA	Up to 1.00
Sustainable	Eliminates Suspended Ceilings Eliminates Fire-Resistive Spray or Gypsum Protection		

1 2" Versa-Dek LS Composite is available upon request.

2 Nominal dimensions. Add 1/8" for manufactured depth.

Please contact New Millennium to learn more about long-span composite systems.



Your nationwide resource for the broadest range of cost-optimized, high-performance structural steel joist and deck solutions

- Structural steel joists, Joist Girders and deck
- Architectural decking solutions
- Multi-story long-span composite systems
- Custom engineering and design assistance
- BIM-based steel joist and deck design
- Nationwide manufacturing and availability
- Design-Build and Integrated Project Delivery (IPD)
- AIA and PDH courses for project optimization

www.newmill.com



NEW MILLENNIUM

BUILDING SYSTEMS

Building a better steel experience.