

Minutes
Rigging Working Group
Tuesday, 28 September 2021
11:00 – 13:00 Eastern Time
via WebEx

Chairpersons:

Bill Sapsis; Sapsis Rigging, Inc.; P; U (presiding)
Christine L. Kaiser; Syracuse Scenery & Stage Lighting Co., Inc.; P; DR

Recording secretaries:

Karl Ruling and Richard Nix (ESTA)

Attendees:

Jesse Adams; Rose Brand Wipers, Inc; P; DR
Patrick Bash; In-House Production; P; DR
Peter W. Batt; Mainstage Theatrical Supply, Inc; P; DR
Drew Becker; InterAmerica Stage, Inc.; A; CP
David Boevers; Carnegie Mellon University; P; DE
Bennett Brian; Reed Rigging Inc.; P; DR
Jay Cid; R&M Materials Handling / Stagemaker; P; MP
Thomas Cowdery; Thomas Cowdery; I; U
Bruce Darden; InterAmerica Stage, Inc.; P; CP
Tyler DeLong; DeLong Rigging Solutions; P; U
Jonathan Deull; JSD Projects LLC; P; U
Siobhan Gee; Siobhan Gee; I; G
Sanford P. Gilzow; Shur-Rig LLC; P; G
Jerry Gorrell; Theatre Safety Programs; P; G
Rod Haney; I.A.T.S.E. Local 891; P; U
Tim Hansen; Oasis Stage Werks; P; DR
Jeremy Hodgson; Jeremy Hodgson; I; G
Ted Jones; Grand Stage; P; U
Edwin S. Kramer; I.A.T.S.E. Local 1; P; U
Ryan Kunkel; Tait Towers Manufacturing LLC; A; CP
Kyle Kusmer; Steven Schaefer Associates, Inc; P; DE
Ed Leahy; Chicago Flyhouse, Inc; P; CP
Jon Lenard; Applied Electronics; A; MP
Paul "Luke" Lewkowicz; Paul E Lewkowicz PC; O; DE
Theresa Lovell; Xtreme Structures and Fabrication; A; MP
Rick Montgomery; Motion Laboratories, Inc.; P; MP
Reid Neslage; H & H Specialties Inc.; P; MP
Shawn Nolan; Clark-Reder Engineering, Inc.; wtg; G
Tracy Nunnally; Vertigo; P; CP
Matt Panther; Reliable Design Services; A; CP
Jeffrey M. Reder; Clark-Reder Engineering, Inc.; P; G
Luke Ricca; Luke Ricca; O; G
John Ringelman; Freeman Companies; P; DR
Ryan Roby; Ryan Roby; O; U
Peter A. Scheu; Scheu Consulting Services, Inc.; O; DE
Chris Schmidt; Freeman Companies; A; DR
Steven Serafin; The Hartford Group; P; G
Mike Skinner; Contract Services Administration Trust Fund; P; U
Todd Spencer; Ventana Capital Investments LLC; P; G
Jason Tello; T6 Truss Designs. LLC; P; CP
Will Todd; Area Four Industries; P; MP
Elmer Veith; Reliable Design Services; P; CP
Steve Walker; Steve A. Walker & Associates; P; G
Mike Webb; Motion Laboratories, Inc.; A; MP

Michael Wells; Xtreme Structures and Fabrication; P; MP
Max A. Wilson; Applied Electronics; P; MP
Allen Winzler; Entertainment and Rigging Engineering; P; DE
Paul Zagajeski; Wenger Corp.; A; CP

1 Opening Remarks

Bill Sapsis called the meeting to order at 11:03. He thanked everyone for attending.

2 Patent and anti-trust statements

2.1 Reading of the anti-trust statement

Bill Sapsis read the following statement aloud to the assembly:

ESTA and its members take seriously their obligation to comply with all applicable antitrust laws. Therefore, during this meeting and during all ESTA events, all discussions will be limited to those subjects that are permitted by the antitrust laws. All members should refrain from any discussion or mention of competitively sensitive subjects such as the current or future prices charged for any member product or services, current or future marketing plans or strategies, and current or future costs, including employee salaries. There also must be no agreement on the suppliers or customers that members will or will not do business with or the markets in which members will conduct business.

Violations of the antitrust laws can have serious consequences. If you have any questions or concerns about anything that is discussed at an ESTA meeting, please bring your concern to ESTA management. An easy to read pamphlet describing the antitrust laws is available from the ESTA staff.

2.2 Reading of the call for patents

Bill Sapsis read the following statement aloud to the assembly:

ESTA intends not to publish any standard that contains protected intellectual property, unless that information can be licensed by anyone for a reasonable fee. ESTA uses a process of open patent and copyright disclosures to implement its intent. ESTA does not conduct patent or copyright searches and does not warrant that its standards contain no protected intellectual property.

In keeping with the open disclosures policy, I ask if anyone present wishes to notify this working group of the existence of a patent, patent application, copyright, or other protected intellectual property that might protect material in a standard being developed by this working group. You need not be the holder of the patent or copyright to notify this working group of its existence.

3 Attendance and Membership

3.1 Requirements for membership

Bill Sapsis read the following statement aloud to the assembly:

Membership is open to all parties who are affected by the work of the group; membership in ESTA is not a requirement, but there is a \$100/person/year participation fee to help fund the costs of running the Technical Standards Program. Voting members are required to attend meetings and vote on letter ballots. Any principal member and alternate that both miss three consecutive meetings or that miss three consecutive letter ballots will have their membership status changed to observer. This action will be taken at the beginning of the first meeting after such inaction and will be recorded in the minutes of that meeting.

3.2 Introduction of attendees

3.3 Determination of a quorum

(There are 72 voting entities. A quorum is 25, a supermajority is 37.)

After a show of hands and count of voting attendees, Richard Nix declared that a supermajority was present.

3.4 Processing of new membership and status change requests

The following applications or status change requests have been received:

Todd Spencer; Ventana Capital Investments, LLC; P; G

*Tiny Good; Showtech Australia; O; U
Cole Muth; Electronic Theatre Controls, Inc. A; MP*

Paul Lucawicz moved to approve the applications. The motion was accepted and carried without objections or abstentions.

3.5 Changes to observer status due to lack of attendance or missed letter ballots

3.5.1 Attendance notices

The following voters have missed two consecutive meetings, and their status will be changed to that of Observer if this meeting is missed:

*R. Duane Wilson; American Society of Theatre Consultants
Andrew Young; Andrew Young
Ted Jones; Grand Stage
Reid Neslage; H&H Specialties, Inc
Bennett Brian; Reed Rigging, Inc.
Jim Niesel; Theatre Projects Consultants, Inc
Robert Haycock; UC Berkley*

Ted Jones, Reid Neslage, and Bennett Brian were in attendance. The status for all others was changed to Observer.

3.5.2 Letter ballot notices

The following voters have missed the last two letter ballots and will be moved to Observer status if the next letter ballot is missed.

There have been no letter ballots since the July meeting

3.5.3 Automatic status changes occurring before this meeting

The following automatic status changes have occurred since the last meeting.

There are none.

3.6 Consensus body

As of today, after all changes resulting from working group action, the consensus body is:

Delegate	Representing	Voting status	Int. category
Ryan Riordan	Accurate Staging, Inc.	P	CP
Brent Armstrong	Alpine Rigging & Structural Design	P	CP
Max A. Wilson	Applied Electronics	P	MP
Jon Lenard	Applied Electronics	A	MP
Will Todd	Area Four Industries	P	MP
Keith Bohn	Area Four Industries	A	MP
Neil Montour	Atlanta Rigging Systems	P	DR
David Boevers	Carnegie Mellon University	P	DE
Ed Leahy	Chicago Flyhouse, Inc	P	CP
Jeffrey M. Reder	Clark-Reder Engineering, Inc.	P	G
Ken Tilson	Columbus McKinnon Corp.	P	MP
Nick Fleming	Columbus McKinnon Corp.	A	MP

Delegate	Representing	Voting status	Int. category
Mike Skinner	Contract Services Administration Trust Fund	P	U
Chris Moulton	Contract Services Administration Trust Fund	A	U
Jordi Van Berkum	Cybermotion North America	P	DR
Tyler DeLong	DeLong Rigging Solutions	P	U
Don Earl	Earl Girls, Inc.	P	DR
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Cole Muth	Electronic Theatre Controls, Inc.	A	MP
Allen Winzler	Entertainment and Rigging Engineering	P	DE
Eric Rouse	Entertainment Project Services, LLC	P	CP
Joseph Champelli	Entertainment Project Services, LLC	A	CP
Joshua "Fritz" Friedensohn	Entertainment Project Services, LLC	A	CP
Ethan W Gilson	Entertainment Rigging Services, LLC	P	U
John Ringelman	Freeman Companies	P	DR
Chris Schmidt	Freeman Companies	A	DR
Gert Jan Brouwer	Frontline Rigging & Motion B.V.	P	CP
Joe Golden	Gallagher Staging & Productions	P	DR
Miriam Paschetto	Geiger Engineers	P	DE
Ted Jones	Grand Stage	P	U
Reid Neslage	H & H Specialties Inc.	P	MP
Pat Grenfell	Hoist Sales & Service	P	DR
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Rod Haney	I.A.T.S.E. Local 891	P	U
Ross Long	I.A.T.S.E. Local 891	A	U
Patrick Bash	In-House Production	P	DR
Bruce Darden	InterAmerica Stage, Inc.	P	CP
Drew Becker	InterAmerica Stage, Inc.	A	CP
Jeremy Hodgson	Jeremy Hodgson	I	G
Jonathan Deull	JSD Projects LLC	P	U
William B. Gorlin	M.G. McLaren, P.C.	P	G
Peter W. Batt	Mainstage Theatrical Supply, Inc	P	DR
Mike Garl	Mike Garl Consulting LLC	P	DE
Rick Montgomery	Motion Laboratories, Inc.	P	MP
Mike Webb	Motion Laboratories, Inc.	A	MP
Michael Shaw	Motion Laboratories, Inc.	A	MP
Stefan Pries	NEP Live Events	P	DR

Delegate	Representing	Voting status	Int. category
Tim Hansen	Oasis Stage Werks	P	DR
Orestes Mihaly	Production Resource Group	P	DR
Troy Atkinson	Production Resource Group	A	DR
Matt Jordan	Production Resource Group	A	DR
Jay Cid	R&M Materials Handling / Stagemaker	P	MP
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
Bennett Brian	Reed Rigging Inc.	P	DR
Elmer Veith	Reliable Design Services	P	CP
Matt Panther	Reliable Design Services	A	CP
Richard J. Nix	Richard J. Nix	I	G
Jesse Adams	Rose Brand Wipers, Inc	P	DR
Stewart Stephens	S2 Technologies	P	G
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Joseph Jeremy	Show Distribution Group, Inc.	P	CP
Bill McIntyre	Show Distribution Group, Inc.	A	CP
Sanford P. Gilzow	Shur-Rig LLC	P	G
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR
Siobhan Gee	Siobhan Gee	I	G
Brad Dittmer	Stage Labor of the Ozarks	P	U
Steve Walker	Steve A. Walker & Associates	P	G
Kyle Kusmer	Steven Schaefer Associates, Inc	P	DE
Mike Merz	Steven Schaefer Associates, Inc	A	DE
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Jason Tello	T6 Truss Designs. LLC	P	CP
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP
David Bond	Tait Towers Manufacturing LLC	A	CP
Ryan Kunkel	Tait Towers Manufacturing LLC	A	CP
Tony Diemont	Texas Scenic Company	P	DR
Russell Solomon	Texas Scenic Company	A	DR
Steven Serafin	The Hartford Group	P	G
Jerry Gorrell	Theatre Safety Programs	P	G
Sam Michael	Thern, Inc.	P	MP
Jeff Wilkowski	Thern, Inc.	A	MP
Paul Brunner	Thern, Inc.	A	MP
Daniel H. Louis	Theta Consulting LLC	P	G

Delegate	Representing	Voting status	Int. category
Thomas Cowdery	Thomas Cowdery	I	U
Troy Trinkle	Troy Trinkle, LLC	P	CP
Nathan Villines	Tyler Truss Systems	P	MP
Bill Edwards	Tyler Truss Systems	A	MP
Josh Conner	Tyler Truss Systems	A	MP
Todd Spencer	Ventana Capital Investments, LLC	P	G
Tracy Nunnally	Vertigo	P	CP
John P. Moore	Vertigo	A	CP
Ian Bevan	Walt Disney Company	P	DE
Lee Chuong	Walt Disney Company	A	DE
Peter V. Svitavsky	Wenger Corp.	P	CP
Dan Culhane	Wenger Corp.	A	CP
Paul Zagajeski	Wenger Corp.	A	CP
Michael Wells	Xtreme Structures and Fabrication	P	MP
Mark Newlin	Xtreme Structures and Fabrication	A	MP
Theresa Lovell	Xtreme Structures and Fabrication	A	MP
Robert Dean	ZFX, Inc.	P	CP
	Total votes possible		69
Votes by interest category	Custom market producer (CP)		14
	Mass market producer (MP)		10
	Dealer or rental company (DR)		16
	User (U)		10
	General interest (G)		12
	Designer (DE)		7

4 Approval of the minutes from the last meeting

[See RWGmin07-2021r1_DRAFT.pdf]

Tim Hansen moved to approve the minutes. The motion was seconded, and carried without objection or abstention.

5 Approval of agenda

Tyler DeLong moved to approve the minutes. The motion was seconded, and carried without objection or abstention.

6 Old Business

6.1 ANSI E1.1 – 2018, wire rope ladders (Reaffirm, revise, or withdraw by 27 September 2023)

6.2 ANSI E1.2 - 20xx, Entertainment Technology - Design, Manufacture and Use of Aluminum Trusses and Towers (Reaffirm, revise, or withdraw by 06 May 2026).

6.3 BSR E1.4-1 - 202x, Entertainment Technology--Manual Counterweight Rigging Systems (Open for revision) *Task group members:* Richard Nix (Leader), Bruce Darden, Dan Culhane, Eric Rouse, Jim Niesel, Pat Grenfell, Peter Batt, Peter Scheu, Reid Neslage, Sam Michael, Ted Jones

Any news or action?

Richard Nix reported that the task group is working on resolutions and will bring a revised draft back to the working group in January.

6.4 ANSI E1.4-2 - 202x, Entertainment Technology—Statically Suspended Rigging Systems (Reaffirm, revise, or withdraw by 06 May 2026.)

6.5 ANSI E1.4-3 - 2020, Entertainment Technology - Manually Operated Hoist Rigging Systems (Reaffirm, revise, or withdraw before 02 June 2025)

6.6 ANSI E1.6-1 - 2021, Entertainment Technology--Powered Hoist Systems (Reaffirm, revise, or withdraw before 10 May 2024)

6.7 ANSI E1.6-2 - 2020, Entertainment Technology--Design, Inspection, and Maintenance of Electric Chain Hoists for the Entertainment Industry (Reaffirm, revise, or withdraw before 14 August 2025)

6.8 ANSI E1.6-3 - 2019, Selection and Use of Serially Manufactured Chain Hoists in the Entertainment Industry (Reaffirm, revise, or withdraw 07 October 2024)

6.9 BSR E1.6-4 - 202x, Design, Manufacture, and Inspection of Portable Controls for Electric Chain Hoists in the Entertainment Industry (Open for revision) *Task group members:* David Bond, Rod Haney, Rick Montgomery, John Ringelman, Elmer Veith, Jem Hodgson, Stephen Wood, Mike Webb, and Joe Jeremy (leader).

From the July 2021 draft meeting minutes:

A task group draft was sent the previous evening, for working group review. Joe Jeremy reported, first thanking all of the task group members for working through the scheduling challenges of the past few months. He asked everyone to please review the current draft, paying particular attention to E-Stop wording. Bill Sapsis asked what the expectation was for the next meeting. Joe replied that he hoped to see working group comments, so that they can be discussed and incorporated if necessary, with the resulting revision being ready in time for the October meeting. Bill asked for everyone to have any comments sent back to Joe by no later than 09 September.

Any news or action?

Rick Montgomery reported that the task group had received some feedback from the working group, and in resolving those comments they found other issues, so they are making some revisions. They expect to have revisions back to the working group in January. This report also applies to the next agenda item, for BSR E1.6-5.

6.10 BSR E1.6-5, Selection and Use of Portable Controls for Electric Chain Hoists in the Entertainment Industry *Task group members:* David Bond, Rod Haney, Rick Montgomery, John Ringelman, Elmer Veith, Jem Hodgson, Stephen Wood, Mike Webb, and Joe Jeremy (leader).

Any news or action?

See report for previous agenda item, 6.9.

6.11 ANSI E1.8 – 2018, Entertainment Technology—Loudspeaker Enclosures Intended for Overhead Suspension—Classification, Manufacture and Structural Testing (Reaffirm, revise, or withdraw by 29 November 2023)

6.12 ANSI E1.15 - 2006 (R2021), Entertainment Technology--Recommended Practices and Guidelines for the Assembly and Use of Theatrical Boom & Base Assemblies (Reaffirm, revise, or withdraw before 08 March 2026)

6.13 ANSI E1.21 - 2020, Entertainment Technology — Temporary Structures Used for Technical Production of Outdoor Entertainment Events (Reaffirm, revise, or withdraw before 23 March 2025)

6.14 BSR E1.22 - 202x, Entertainment Technology - Fire Safety Curtain Systems (Open for revision) *Task group members:* Dan Culhane (task group leader), Bruce Darden, Tim Hansen, Eric Rouse, Ted Jones
[See BSR E1-22_202x_Rig2021-2035r0.pdf]

The working group has delivered a draft to the working group, which will require a complete reformat before it is publicly distributed.

Any action or updates?

Bruce Darden moved to send the document out for first public review. The motion was seconded, and carried without objection or abstention. This motion has also been preloaded to the TSC for consideration at their meeting on Friday.

6.15 ANSI E1.39 - 202x, Entertainment Technology –Selection and Use of Personal Fall Arrest Systems on Portable Structures Used in the Entertainment Industry (Reaffirm, revise, or withdraw by 06 May 2026).

6.16 BSR E1.43 - 202x, Live performer flying effect standard (Open for revision) *Task group members:* Eric Rouse (task group leader), Jonathan Duell, Ryan Kunkel, Robert Dean, Tracy Nunnally, Bill Gorlin, Fred Caron, and Stewart Stephens.

Any news or action?

Tracy Nunnally reported that they are making progress, and there is a chance to have something back to the working group in January. Bill Gorlin said he would encourage the task group to have something ready for January's meeting.

6.17 Rigging Glossary

Any news or action?

Chris Kaiser reported that the newly revived ad-hoc group would be meeting next week. Those who had volunteered from her previous request for interested parties include Siobhan Gee, David Boevers, Mike Wells, Thomas Cowdery, and Ted Jones. They are making progress.

6.18 ANSI E1.47 – 2020, Recommended Guidelines for Entertainment Rigging System Inspections (Reaffirm, revise or withdraw before 18 June 2025)

6.19 ANSI E1.50-1 – 2017, Requirements for the Structural Support of Temporary LED, Video & Display Systems (Reaffirm, revise or withdraw by 14 August 2022)

6.20 ANSI E1.56 - 2018, Rigging Support Points Design, Fabrication, Installation, and Testing (Reaffirm, revise or withdraw by 06 November 2023)

6.21 ANSI E1.67 – 2021, Design, Inspection, Maintenance, Selection, and Use of Hand-operated Chain-and Lever Hoists for the Entertainment Industry (Reaffirm, revise, or withdraw by 06 May 2026).

6.22 BSR E1.70 – 202x, Selection and Use of Ground Supported Winch Stands and Towers in the Entertainment Industry *Task group members:* Jacob Abbott, Ethan Gilson (task group leader), Eric Rouse, Will Todd, Elmer Veith, Ryan Riordan, and Max Wilson

From the draft July meeting minutes:

Ethan Gilson reported that they are not making any progress, but would try to have something ready for the October meeting.

Any news or action?

Elmer Veith reported that they are meeting, they have an outline, but do not have a document ready. He said he would strongly encourage Ethan to have something ready for January's meeting.

7 New business

Johnathan Duell asked about the Event Safety's Rigging draft standard, and if there should be some coordination with the RWG. Richard Nix said that it had already been sent to the RWG for a 21-day informal review period to identify conflicts - there were none - and that the draft is now in public review until 08 November.

8 Other business and announcements

8.1 Above & Beyond Awards

9 Schedule for future meetings

The meeting schedule may be found at <http://www.esta.org/ESTA/meetings.php>. The meeting schedule has not yet been finalized, but will occur via WebEx during the week of 17 January 2022. Other future meetings, subject to change, are as follows:

Spring 2022: In conjunction with USITT conference; in-person, 02-05 March 2022, Baltimore, MD

Summer 2022: In conjunction with the NAMMShow 2022; in-person, 03-05 June 2022, Anaheim, CA

10 Adjournment

The agenda being complete, and there being no further business brought forward, Bill Sapsis thanked everyone for their attendance, then declared the meeting adjourned at 11:38.

Rigging Working Group members as of 28 September 2021

Name	Representing	Status	Int Cat
Jacob Abbott	PSAV Presentation Services	O	U
Jesse Adams	Rose Brand Wipers, Inc	P	DR
Matthew Antonucci	Contract Services Administration Trust Fund	O	U
Brent Armstrong	Alpine Rigging & Structural Design	P	CP
Troy Atkinson	Production Resource Group	A	DR
William Ian Auld	Auld Entertainment	O	U
Robert Barbagallo	Solotech Inc.	O	DR
Dana Bartholomew	Silver State Wire Rope and Rigging	P	DR
Patrick Bash	In-House Production	P	DR
Peter W. Batt	Mainstage Theatrical Supply, Inc	P	DR
William Beautyman	Limelight Productions, Inc.	O	DR
Drew Becker	InterAmerica Stage, Inc.	A	CP
Justin Bennett	University of the Incarnate Word	O	U
Jordi Van Berkum	Cybermotion North America	P	DR
Ian Bevan	Walt Disney Company	P	DE
Roy Bickel	Roy Bickel	O	G
Tyler Bland	Walt Disney Company	O	U
David Boevers	Carnegie Mellon University	P	DE
Keith Bohn	Area Four Industries	A	MP
David Bond	Tait Towers Manufacturing LLC	A	CP
Bennett Brian	Reed Rigging Inc.	P	DR
Gert Jan Brouwer	Frontline Rigging & Motion B.V.	P	CP
Paul Brunner	Thern, Inc.	A	MP
David M. Campbell	Geiger Engineers	O	G
Frederic Caron	Frederic Caron	O	U
Joseph Champelli	Entertainment Project Services, LLC	A	CP
Lee Chuong	Walt Disney Company	A	DE
Jay Cid	R&M Materials Handling / Stagemaker	P	MP
Daniel J. Clark	Clark-Reder Engineering, Inc.	O	G
Benjamin Cohen	Chicago Flyhouse Inc.	O	CP
Josh Conner	Tyler Truss Systems	A	MP
Thomas Cowdery	Thomas Cowdery	I	U
Brandon Cox	Heavyweight Solutions	O	CP
Dan Culhane	Wenger Corp.	A	CP
Bruce Darden	InterAmerica Stage, Inc.	P	CP

Rigging Working Group members as of 28 September 2021

Name	Representing	Status	Int Cat
David Darland	PSAV Presentation Services	O	U
Robert Dean	ZFX, Inc.	P	CP
Tyler DeLong	DeLong Rigging Solutions	P	U
Jonathan Deull	JSD Projects LLC	P	U
Tony Diemont	Texas Scenic Company	P	DR
Jim Digby	Event Safety Alliance	O	U
Brad Dittmer	Stage Labor of the Ozarks	P	U
Russ Dusek	I Weiss	O	MP
Don Earl	Earl Girls, Inc.	P	DR
Bill Edwards	Tyler Truss Systems	A	MP
Jennifer Ferguson	Kito Group	O	MP
Nick Fleming	Columbus McKinnon Corp.	A	MP
Tim Franklin	Theta Consulting LLC	O	G
Joshua "Fritz" Friedensohn	Entertainment Project Services, LLC	A	CP
Mike Garl	Mike Garl Consulting LLC	P	DE
James M. Garner	Walt Disney Company	O	G
Siobhan Gee	Siobhan Gee	I	G
Ethan W Gilson	Entertainment Rigging Services, LLC	P	U
Sanford P. Gilzow	Shur-Rig LLC	P	G
Joe Golden	Gallagher Staging & Productions	P	DR
Tiny Good	Showtech Australia	O	U
William B. Gorlin	M.G. McLaren, P.C.	P	G
Jerry Gorrell	Theatre Safety Programs	P	G
Michael P. Gosenski	Rigging Systems LLC	O	U
Pat Grenfell	Hoist Sales & Service	P	DR
Phillip R. Hampton	Charcoalblue	O	DE
Rod Haney	I.A.T.S.E. Local 891	P	U
Tim Hansen	Oasis Stage Werks	P	DR
Sean Harding	Port Lighting Systems	O	G
Robert Haycock	UC Berkeley	O	U
Chris Higgs	Total Solutions Group	O	G
Jeremy Hodgson	Jeremy Hodgson	I	G
Donald Hoffend_III	Avista Designs, LLC	O	G
Quinten James	Flying By Troy	O	U
Joseph Jeremy	Show Distribution Group, Inc.	P	CP

Rigging Working Group members as of 28 September 2021

Name	Representing	Status	Int Cat
Ted Jones	Grand Stage	P	U
Matt Jordan	Production Resource Group	A	DR
Christine L. Kaiser	Syracuse Scenery & Stage Lighting Co., Inc.	P	DR
Jerald Kraft	JTH Lighting Alliance	O	CP
Edwin S. Kramer	I.A.T.S.E. Local 1	P	U
Ryan Kunkel	Tait Towers Manufacturing LLC	A	CP
Kyle Kusmer	Steven Schaefer Associates, Inc	P	DE
Ed Leahy	Chicago Flyhouse, Inc	P	CP
Jon Lenard	Applied Electronics	A	MP
Phillip Lewis	Tait Towers Manufacturing LLC	O	CP
Paul "Luke" Lewkowicz	Paul E Lewkowicz PC	O	DE
Michael Lichter	Electronic Theatre Controls, Inc.	A	MP
Ross Long	I.A.T.S.E. Local 891	A	U
Jacob E. Loretto	Musson Theatrical Inc.	O	DR
Daniel H. Louis	Theta Consulting LLC	P	G
Theresa Lovell	Xtreme Structures and Fabrication	A	MP
Wendy Manson	Wendy Manson	O	G
Ryan McAlpine	Foy Invention Enterprises, Inc.	O	DR
Bill McIntyre	Show Distribution Group, Inc.	A	CP
Mike Merz	Steven Schaefer Associates, Inc	A	DE
Sam Michael	Thern, Inc.	P	MP
Steven Michelman	Entertainment Project Services, LLC	O	CP
Orestes Mihaly	Production Resource Group	P	DR
Rick Montgomery	Motion Laboratories, Inc.	P	MP
Neil Montour	Atlanta Rigging Systems	P	DR
John P. Moore	Vertigo	A	CP
Chris Moulton	Contract Services Administration Trust Fund	A	U
Bartholomew J. Mueller	Recreation Engineering Inc.	P	DE
Cole Muth	Electronic Theatre Controls, Inc.	A	MP
John Neal	Rhino Staging	O	G
Reid Neslage	H & H Specialties Inc.	P	MP
Mark Newlin	Xtreme Structures and Fabrication	A	MP
Jim Niesel	Theatre Projects Consultants, Inc.	O	DE
Richard J. Nix	Richard J. Nix	I	G
Tracy Nunnally	Vertigo	P	CP

Rigging Working Group members as of 28 September 2021

Name	Representing	Status	Int Cat
Gregory Orth	WNP Services, Inc.	O	DR
Matt Panther	Reliable Design Services	A	CP
Miriam Paschetto	Geiger Engineers	P	DE
Kurt Pragman	Pragman Associates, LLC	O	G
Stefan Pries	NEP Live Events	P	DR
Demian Purdy	PSAV Presentation Services	O	U
Jeffrey M. Reder	Clark-Reder Engineering, Inc.	P	G
Luke Ricca	Luke Ricca	O	G
Steven Ricks	Electronic Theatre Controls, Inc.	P	MP
Mark Riddlesperger	LA ProPoint, Inc.	O	CP
John Ringelman	Freeman Companies	P	DR
Ryan Riordan	Accurate Staging, Inc.	P	CP
Ryan Roby	Ryan Roby	O	U
Eric Rouse	Entertainment Project Services, LLC	P	CP
Tim Salamon	PSAV Presentation Services	O	DR
Bill Sapsis	Sapsis Rigging, Inc.	P	U
Peter A. Scheu	Scheu Consulting Services, Inc.	O	DE
Chris Schmidt	Freeman Companies	A	DR
Ford Sellers	Chauvet Lightings	O	MP
Steven Serafin	The Hartford Group	P	G
Michael Shaw	Motion Laboratories, Inc.	A	MP
Harold Ike Shippers	Syracuse Scenery & Stage Lighting Co., Inc.	A	DR
Mike Skinner	Contract Services Administration Trust Fund	P	U
Monica Skjonberg	Skjonberg Controls, Inc.	O	CP
Knut Skjonberg	Skjonberg Controls, Inc.	O	CP
John C. Snook	Thermotex Industries Inc.	O	CP
Lynn M. Snook	Thermotex Industries Inc.	O	CP
Russell Solomon	Texas Scenic Company	A	DR
Todd Spencer	Ventana Capital Investments LLC	P	G
Stewart Stephens	S2 Technologies	P	G
Peter V. Svitavsky	Wenger Corp.	P	CP
Ross Taylor	Taylor & Taylor Associates	O	G
Jason Tello	T6 Truss Designs. LLC	P	CP
Ken Tilson	Columbus McKinnon Corp.	P	MP
Will Todd	Area Four Industries	P	MP

Rigging Working Group members as of 28 September 2021

Name	Representing	Status	Int Cat
Troy Trinkle	Troy Trinkle, LLC	P	CP
Stephen Vanciel	IATSE Local 631	O	U
Elmer Veith	Reliable Design Services	P	CP
Nathan Villines	Tyler Truss Systems	P	MP
Steve Walker	Steve A. Walker & Associates	P	G
Patrick Wallace	PSAV Presentation Services	O	U
Mike Webb	Motion Laboratories, Inc.	A	MP
Charlie Weiner	Eurotruss	O	MP
Michael Wells	Xtreme Structures and Fabrication	P	MP
Drew Wending	PSAV Presentation Services	O	DR
Marty Wesstrom	Mountain Productions Inc.	O	DR
Mike Weston	PSAV Presentation Services	O	DR
Jeff Wilkowski	Thern, Inc.	A	MP
Greg Williams	PSAV Presentation Services	O	G
R. Duane Wilson	Amer. Society of Theatre Consultants	O	DE
Max A. Wilson	Applied Electronics	P	MP
Allen Winzler	Entertainment and Rigging Engineering	P	DE
Stephan Jon Wood	Tait Towers Manufacturing LLC	P	CP
Jeong Sik Yoo	Ghost LX	O	DE
Andrew Young	Andrew Young	O	U
Paul Zagajeski	Wenger Corp.	A	CP