



TC 4.5

**AMERICAN SOCIETY OF HEATING, REFRIGERATING, AND AIR CONDITIONING ENGINEERS, INC.**  
180 Technology Parkway NW, Peachtree Corners, GA 30092  
(404) 636-8400

**TC/TG/TRG MINUTES COVER SHEET**

(Minutes of all TC/TG/TRG Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/TRG NO.:	<b>4.5</b>	TC/TG/TRG TITLE:	<b>Fenestration</b>
DATE OF MEETING:	<b>January 23, 2024, 2023</b>	LOCATION:	<b>Marriott Chicago (3) Hybrid meeting</b>
DATE ISSUED:	<b>January 23, 2024</b>	RECORDED BY:	<b>Thanos Tzempelikos</b>



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Name	Affiliation	Email	Member	Present
Mahabir Bhandari	ORNL	bhandarims@ornl.gov	VM	Y
Thanos Tzempelikos	Purdue University	ttzempel@purdue.edu	VM	Y
Aziz Laouadi	NRC	aziz.laouadi@nrc.ca	VM	Y
Iason Konstantzos	University of Nebraska - Lincoln	iason.konstantzos@unl.edu	Chair, VM	Y
Bipin Shah	Winbuild Inc	winbuild.usa@gmail.com	VM	Y
Sagar Rao	AEI	sagar.rao@outlook.com	VM	Y
Robert Hart	LBNL	rghart@lbl.gov	VM	Y
Dave Monsour	DASMA	dmonsou@thomasamc.com	VM	N
Charlie Curcija	LBNL	DCCurcija@lbl.gov	CM	Y
Jean-Michel Dussault	Veridis Solutions inc.	jean-michel.dussault@veridissolutions.com	CM	Y
Michael Hammond	Vitro Architectural Glass	mhammond@vitro.com	CM	Y
Niraj Kunwar	ORNL	kunwarn1@ornl.gov	CM	Y
Ravi Srinivasan	Univ. of Florida	sravi@ufl.edu	CM	Y
Michael Thoman	NFRC	mthoman@nfrf.org	PCM	Y
Sam Taylor			PCM	Y
Ratnesh Tiwari	University of Maryland	ratnesht@gamil.com	CM	Y
Alex McGowan	WSP Canada Inc.	alex.mcgowan@wsp.com	CM	Y
Marc LaFrance	DOE	Marc.lafrance@ee.doe.gov	Guest	Y
<b>Total Voting members:8</b> <b>Voting members present: 7</b>				

2023 ASHRAE Annual Conference June 24-28, 2023, Tampa, FL  
**TC 4.5 Annual Meeting – Hybrid (In-Person with Virtual Option)**  
**Tuesday, June 27, 2023**



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**SCOPE:**

TC 4.5 is concerned with the identification and evaluation of all physical properties of (1) glasses and other glazing materials, (2) shading and shielding materials and devices, and (3) control devices and strategies which influence the radiant, conduction, and convection transfer of both heat and light through fenestration systems. It is also concerned with the development of procedures for calculating and measuring solar heat gain, daylight admission, and heat transfer through fenestration systems.

**COMMITTEE AND MEETING INFORMATION**

TC Web Site: <http://tc0405.ashraetcs.org>

Basecamp: <https://3.basecamp.com/3106353/projects>

**INTRODUCTIONS AND ROSTER CHECK**

7 VMs present, quorum was reached

**APPROVE MEETING AGENDA**

Agenda was approved unanimously

**APPROVE MINUTES FROM PREVIOUS MEETING**

The minutes were approved unanimously

**ANNOUNCEMENTS (TC CHAIR)**

ASHRAE developing guides on building decarbonization, embodied carbon

**ROSTER CHANGES**

None

**LIAISONS REPORTS**

**a. Reports /Guidance/update**

Section 4 liaison, Jason Glazer:

- New strategic plan- accepting comments until Jan. 31<sup>st</sup> and then again sometime in March
- Coordination between TC 4 committees for research, proposals, etc.

Section 4 Research Liaison, Dennis:



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- 1926- has bids, waiting for approval/removal
- 1925- accepted with comments- TC will receive feedback soon
- Next RAC meeting in March 2024

### **SUBCOMMITTEE REPORTS**

- i. Program (Iason Konstantzos)
  - i. Indianapolis (Annual 2024)  
Proposed seminars
  - ii. Orlando, FL (Winter 2025)  
Preparing seminars and technical sessions
- ii. Research (Sagar Rao)
  - No new RTARS
  - Updates on WS
  - Voting to terminate RP-1789 due to limited market share
  - Votes 5-2-0
  - Project will be terminated- will notify ASHRAE
- iii. Calculation Methods (Charlie Curcija)  
Postponed
- iv. Handbook (Ravi Srinivasan)  
Updates on Handbook chapter- final changes by May 31

### **OLD BUSINESS**

N/A

### **NEW BUSINESS**

N.A

### **ADJOURN**