



1791 Tullie Circle, N.E. / Atlanta, GA 30329
404-636-8400

TC/TG/TRG MEETING MINUTES

TC/TG/TRG NO. (TITLE): TC 5.9 Enclosed Vehicular Facilities
DATE/TIME OF MEETINGS: February 3, 2026 3:30 - 5:30 PM PST
LOCATION: Las Vegas, NV
Hybrid Conference

- ❖ The Chair, Dmitry Kogan, called the meeting to order at 3:30 pm PST.
- ❖ There were 5 of 7 voting members present, which met requirements for a quorum.
See attendee list attached to minutes.
- ❖ Review Committee's Scope

TC 5.9 is concerned with existing technology and design requirements for enclosed transportation facilities. Enclosed vehicular facilities encompass the subway portion of rapid transit systems, vehicular tunnels, rail tunnels, enclosed bus ways, bus terminals and parking garages.
- ❖ Chairman's Remarks – Dmitry Kogan
 - ❖ Provided a reminder of:
 - ❖ **ASHRAE Value Statement/Code of Ethics.** In ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and shall avoid all real or perceived conflicts of interest. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We celebrate diverse and inclusive communities, understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and the communities our Society serves. We respect and welcome all.
 - ❖ **Diversity Commitment.** *ASHRAE is committed to providing a welcoming environment. Our culture is one of inclusiveness, acknowledging the inherent value and dignity of each individual. We proactively pursue and celebrate diverse and inclusive communities understanding that doing so fuels better, more creative and more thoughtful ideas, solutions and strategies for the Society and for the communities our Society serves. We respect and welcome all people regardless of age, gender, ethnicity, physical appearance, thought styles, religion, nationality, socio-economic status, belief systems, sexual orientation or education.*
 - ❖ **ASHRAE Artificial intelligence (AI) policy (approved Feb 9, 2025):** ASHRAE prohibits the entry of content from any ASHRAE publication or related ASHRAE intellectual property (IP) into any AI tool, including but not limited to ChatGPT. Additionally, creating derivative works of ASHRAE IP using AI is also prohibited without express written permission from ASHRAE.
- ❖ Welcome to all existing and new attendees
- ❖ Presentation highlights from Chair meeting on Sunday February 1, 2026 morning.
 - ❖ Research Advisory Panel Update
 - ❖ ASHRAE Technical Committees (TCs) play the lead role in most research projects.
 - ❖ The TC Research Subcommittees originate and manage research projects based on the needs of their technical area of expertise.
 - ❖ Projects must address a well-defined technical need and demonstrate value to ASHRAE and the industry.
 - ❖ Feedback from TCs is Critical to our effort!

❖ Liaison Reports

- ❖ Section 5 Head (Farzin Rad) – did not attend.

❖ Approval of minutes from 2025 Phoenix Annual Meeting – *approved*.

❖ Membership/Roster

(All voting members and/or subcommittee chairs)

Name	Role	Voting		Name	Role	Voting
Dmitry Kogan	Chair	Yes		David Newman	Membership	
Sean Cassidy	Vice Chair	Yes		Michael Feuser	Research Chair	Yes
David Hahm	Secretary	Yes		Elias Papadopoulos	Member	Yes
Yuan Li	Standards Chair	Yes		TJ Lyle	Member	Yes
Andrew Louie	Handbook Chair					
Yoon Ko	Program Chair					
Fraser Campbell	Webmaster					

❖ Subcommittee Reports

❖ Programs Subcommittee (Yoon Ko)

- ❖ Program sponsored by TC5.9 at Las Vegas meeting: Electric Vehicle Fire Safety and Other Transportation Infrastructure Challenges Seminar
- ❖ See attached Program Sub-Committee Report
- ❖ TC 1.3 will have a program on BESS, looking for co-sponsors
- ❖ David Hamm wants to present on hydrogen vehicle safety in tunnels

❖ Research Subcommittee (Michael Feuser)

❖ Research Committee

- ❖ Douglas Scott is our section 5 Research Liaison.
- ❖ TC 5.9 has no active RTARS
- ❖ Information from the ASHRAE Portal - \$7.5 MIL in active projects
- ❖ Since 59 ASHRAE has sponsored 964 project worth \$83.2 MIL
- ❖ The RAC research manual has been updated and is available on-line.

❖ Working groups

- ❖ Emergency ventilation for vehicular tunnels (Norris Harvey champion) – Sean Cassidy will check with Norris
- ❖ High Pressure transients (David Newman champion) – will coordinate with TC 2.7
- ❖ Freight train tunnel ventilation (David Newman) – will coordinate with TC 2.7
- ❖ Scott Shi (absent): thermal comfort and critical velocity working groups updates
 - Thermal Comfort: Draft is in review. Intent is to include in the Handbook Chapter and, eventually, in Standard 217.
 - Critical velocity: Scott is in the progress of updating the draft. The goal is still not introducing any new content outside of NFPA 130 and 502, but to update the narrative to include the latest updates from the NFPA. The working group will suggest any technical recommendations to be submitted to the NFPA Public Input process.
 - Both working groups are aiming to have the update to be formally presented and reviewed by the TC 5.9 later this year.

- ❖ Handbook Subcommittee (Sal Marsico for Andrew Louie)
 - ❖ The handbook chapter approval is due by Jul 31st according to the schedule (see attached)
 - ❖ Our handbook Liaison, Mark Miller, will notify us of the actual deadline.
 - ❖ We have not voted on the changes yet, our last chance would be the summer meeting in Austin (June 27th to July 1st)
 - ❖ A draft will be sent to the committee by May 1st to allow enough time to review prior to Austin meeting.
 - ❖ We have many editorial updates already in the draft, with a new section on thermal comfort that Scott Shi has developed that we need to find a place to put into the chapter
 - ❖ The latest version of the chapter is in basecamp in the “HB Meeting on 3/27/2025” Folder (see screenshot below)
 - ❖ Our goal before the summer meeting is to incorporate the thermal comfort section into the chapter and prepare for a vote for the Summer-Austin meeting.
- ❖ Standards Subcommittee (Yuan Li)
 - ❖ *Standard 217*
 - ❖ *Remote meeting*
 - ❖ *100% members joined and Yuan Li thanked for their contribution*
 - ❖ *Damper section updates are in progress*
 - ❖ *SPC 217 committee (5 voting members plus non-voting members)*
 - *New members are welcome*
 - *Maintenance – Damper section updates are in progress*
 - *Subcommittee meeting was right before TC 5.9 Las Vegas meeting*
 - *Yuan/Igor will lead review of Chapters 1-5*
 - *David Newman/David Hahm: Chapter 6*
 - *Chapter 7-8: Needs champion*
 - *Jane/Bill/Dimitry: Chapters 9-11*
 - ❖ *Enrollment form for Standard 217 members? <https://www.ashrae.org/technical-resources/standards-and-guidelines/apply-to-a-project-committee>*
- ❖ Webmaster (Fraser Campbell)
 - ❖ Up to date
 - ❖ Any subcommittee meetings can be also posted
- ❖ Membership Chair (David Newman)
 - ❖ Update information on website profiles
 - ❖ 9 provisional corresponding members – convert to corresponding
 - ❖ Voting members – it was reported that TJ is no longer a part of the committee; Elias, Michael Feuser and Dimitry Kogan will be rolled off in Austin; new voting members are under consideration
 - ❖ Check with non-attending members
- ❖ New Business and Comments
 - ▮ Progress meetings
- ❖ Next Meeting scheduled for Austin, TX – Tuesday June 30, 2026
- ❖ Adjournment at 4:34 pm.
- ❖ Submitted by Dimitry Kogan, Chair – TC 5.9

TC5.9 PROGRAM SUB-COMMITTEE REPORT

Prepared by Yoon Ko

ASHRAE Annual Conference Las Vegas, 2025 Jan 31-Feb 4

1. Programs for the current meeting Programs:

Seminar: Designing for the Electric Vehicle Era: Fire Safety and Infrastructure Challenges

Program Track: Research Summit

- Fire Safety Challenges of EV Parking Structures: A Review of Past Incidents and Emerging Design Needs (Dahai Qi, Ph.D., Université de Sherbrooke, Sherbrooke, Canada)
- Parking Garage Design with Electric Vehicles in Mind (Eric DeSplinter, Astral Engineers, Ontario, CA, USA)
- Designing Fire Protection Systems for Electrified Transportation Infrastructure: Challenges, Standards, and Research Needs (Yoon Ko, PhD, NRC-CNRC)

Seminar : Vertical Resilience: Life Safety System Design in Supertall Buildings Around the World

Sunday, February 1 8:00 AM – 9:00 AM PST

Indoor Environmental Quality in India's First Semi-High-Speed Underground Transit Stations: A Case Study from the Delhi–Meerut Namo Bharat Corridor

Presenting Author: Mahendra Kumar, Director/Electrical & Rolling Stock, NCRTC, New Delhi, India

2. Future conferences

	Conference paper abstract due	Seminar, Forum proposal due	Extended Abstract Paper Due	Debate, Seminar etc
Austin, TX, June 27-July 1, 2026	-	-		Feb 25 th , 2026
Jan. 23-27, 2027 – Chicago, IL				
June 12-16, 2027 – New Orleans, LA				
Feb 5-9, 2028 - Orlando, FL				

Debate - 1 moderator, 60-90 min, 3-4 panelist, in individual presentations

Forum - 1 moderator, 60 minutes, no presentations

Panel -1 moderator, 60-90 minutes, 3-6 participants, no individual presentations

Seminar -2-3 speakers for 60 min or 3-5 speakers for 90 min

Workshop - One chair and two presenters (maximum), 60 min long including 30 min presentation and 30 min discussion

2026 ASHRAE Annual Conference (June 27- July 1, 2026 | Austin, TX)

Conference Website: <https://www.ashrae.org/conferences/2026-annual-conference-austin/2026-annual-conference-technical-program>

3. TC 5.9 Program topics

- ☐ NEW TOPICS!
- ☐ Underground Parking Garage issues + EV hazards

Updated on 2026-02-24

TC 5.6 organized a seminar session for EV parking garage, and they are working on a new program and RTAR.

- ☐ AI application to tunnel safety systems
 - ☐ Hydrogen vehicle safety issues
 - ☐ Electric bus facilities (added through 20240912 meeting)
 - ☐ Thermal comfort- subway stations (Scott Shi)→ it is moving to right directions now. Discussion in progress.
- ☐ **Other topics, please contact Yoon Ko <yoan.ko@nrc-cnrc.gc.ca>**

ID	Start time	Completion time	Email	Name	Name2	Affiliation	E-mail	Member (Voting, Corre	YEA	Member? (Yes/No)	Attendance (In-Person/Virtual)	International Member?
1	2/3/26 15:31:10	2/3/26 15:31:31	anonymous		Ryan Danks	RWDI	ryan.danks@rwdi.com	PCM	no		In-person	No
2	2/3/26 15:30:38	2/3/26 15:31:53	anonymous		James Carlin	Pottorff	Jcarlin@pottorff.com	Corresponding	No		In-person	No
3	2/3/26 15:30:53	2/3/26 15:32:33	anonymous		Valentina Nedelcu	Nailor Industries Inc	val@nailor.com	Corresponding	No		Person	No
4	2/3/26 15:31:54	2/3/26 15:33:11	anonymous		Matt Davy	Arup	matt.davy@arup.com	Corresponding Member	No		In-Person	No
5	2/3/26 15:37:59	2/3/26 15:38:38	anonymous		Fraser Campbell	Halton	fraser.campbell@halton	Corresponding member	No		In person	No
6	2/3/26 15:38:06	2/3/26 15:39:01	anonymous		David Peth	Halton	Dapeth@gmail.com	Corresponding	No		In-person	No
7	2/3/26 15:38:20	2/3/26 15:39:04	anonymous		Salvatore Marsico	WSP USA	salvatore.marsico@wsp	Corresponding	No		Virtual	No
8	2/3/26 15:38:36	2/3/26 15:39:09	anonymous		Eric Li	RWDI	eric.li@rwdi.com	Corresponding	No		Virtual	No
9	2/3/26 15:37:04	2/3/26 15:39:23	anonymous		Jane Miller	Zitron USA	Jane.miller@zitron.com	Corresponding	No		In-person	No
10	2/3/26 15:38:53	2/3/26 15:39:23	anonymous		David Hahm	Mott MacDonald	david.hahm@mottmac.com	Voting	No		In-Person	No
11	2/3/26 15:38:28	2/3/26 15:39:25	anonymous		Jacob Carr	AWV	jcarr@awv.com	Corresponding	No		In-Person	No
12	2/3/26 15:38:41	2/3/26 15:39:50	anonymous		Steve Saunders	Guest	Steve.saunders@halton	Guest	No		In-person	Yes
13	2/3/26 15:38:49	2/3/26 15:39:54	anonymous		Yoon Ko	NRCC	Yoon.ko@nrc-cnrc.gc.ca	Corresponding	No		In-person	No
14	2/3/26 15:39:39	2/3/26 15:41:05	anonymous		Kingson Andy Li	LA Metro	likingsunandy@gmail.com	Corresponding	No		Virtual	No
15	2/3/26 15:39:13	2/3/26 15:41:33	anonymous		Somesh Bhatia	Mott MacDonald	bhatiasomesh7@gmail.com	Corresponding	No		Virtual	No
16	2/3/26 15:39:20	2/3/26 15:41:42	anonymous		Bill Lampkin	Greenheck Fan Industries	Bill.lampkin@greenheck	Corresponding	No		In person	No
17	2/3/26 15:39:24	2/3/26 15:43:42	anonymous		Vincent Tang	RWDI	vincent.tang@rwdi.com	Provisional Corresponding	No		In-Person	Yes
18	2/3/26 15:43:26	2/3/26 15:43:56	anonymous		Yuan Li	Jacobs	yuan.li@jacobs.com	Voting	No		Virtual	No
19	2/3/26 15:45:09	2/3/26 15:45:42	anonymous		Tyler J. Else	HNTB	telse@hntb.com	Guest	No		Virtual	No
20	2/3/26 15:44:17	2/3/26 15:46:50	anonymous		David Newman	Mott MacDonald	David.newman@mottmac.com	Subcommittee Chair - M	No		In-person	No
21	2/3/26 15:38:34	2/3/26 15:49:08	anonymous		Duncan phye	Verdantas	Dphyfe@verdantas.com	Cm	No		In person	No
22	2/3/26 15:30:00	2/3/26 15:30:00	anonymous		Dimitry Kogan	Port Authority of NY & NJ	dkogan@panynj.gov	Voting	No		In-person	No
23	2/3/26 15:30:00	2/3/26 15:30:00	anonymous		Sean Cassidy	HNTB	scassady@hntb.com	Voting	No		Virtual	No
24	2/3/26 15:30:00	2/3/26 15:30:00	anonymous		Michael Feuser	Woods	michael.feuser@fiaktgrrc	Voting	No		In-person	No
25	2/3/26 15:30:00	2/3/26 15:30:00	anonymous		Igor Maevski	Jacobs	igor.maevski@jacobs.co	Corresponding	No		In-person	No